CITY OF SPOKANE

NOTICE

REGARDING CITY COUNCIL MEETINGS

Notice is hereby given that City Council has resumed in-person meetings. City Council's standing committee meetings, Briefing Sessions, Legislative Sessions and study sessions are held in City Council Chambers – Lower Level of City Hall, 808 W. Spokane Falls Blvd.

City Council Members, City staff, presenters and members of the public will still have the option to participate virtually via WebEx during all meetings, with the exception of Executive Sessions which are closed to the public. Call in information for the October 10, 2022, meetings is below. All meetings will continue to be streamed live on Channel 5 and online at https://my.spokanecity.org/citycable5/live and https://www.facebook.com/spokanecitycouncil.

WebEx call in information for the week of October 10, 2022:

1:15 p.m. Committee Meeting: 1-408-418-9388; access code: 2491 952 4023; password: 0320

3:30 p.m. Briefing Session: 1-408-418-9388; access code: 2485 018 9050; password: 0320

6:00 p.m. Legislative Session: 1-408-418-9388; access code: 2482 502 7177; password: 0320

Thursday Study Session: 1-408-418-9388; access code: 2480 676 7327; password: 0320

To participate in public comment (including Open Forum):

Testimony sign up is open from 5:00-6:00 p.m. on Monday, October 10, 2022. You must sign up by 6:00 p.m. to be called on to testify. Sign up forms will be available outside of Council Chambers for in-person attendees.

Those wishing to give testimony virtually can sign up between 5:00-6:00 p.m. at https://forms.gle/Vd7n381x3seaL1NW6. (If you are unable to access the form by clicking the hyperlink, please copy and paste the link address into your browser window.) Instructions for participation are provided on the form when you sign up.

The Open Forum is a limited public forum; all matters discussed in the open forum shall relate to the affairs of the City and items of interest not relating to the Current or Advance Agendas, pending hearing items, or initiatives or referenda in a pending election. Individuals speaking during the open forum shall address their comments to the Council President and shall not use profanity, engage in obscene speech, or make personal comment or verbal insults about any individual.

CITY COUNCIL MEETINGS
RULES – PUBLIC DECORUM

Strict adherence to the following rules of decorum by the public will be observed and adhered to during City Council meetings, including open forum, public comment period on legislative items, and Council deliberations:

1. **No Clapping!**
2. **No Cheering!**
3. **No Booing!**
4. **No public outbursts!**
5. **Three-minute time limit for comments made during open forum and public testimony on legislative items!**

In addition, please silence your cell phones when entering the Council Chambers!

Further, keep the following City Council Rules in mind:

Rule 2.2 OPEN FORUM

A. At the 6:00 p.m. legislative session, after the conclusion of the legislative agenda, the Council shall hold an open forum unless a majority of Council Members vote otherwise. The open forum will not extend past 9:30 p.m. unless extended by a supermajority of the Council.

B. Members of the public can sign up for open forum in the hour preceding the legislative session via the virtual testimony form linked in the meeting packet or in person outside Council Chambers. The order of the speakers be determined at the discretion of the chair. Each speaker shall be limited to no more than three minutes unless a majority of the Council Members in attendance vote on an alternate time limit.

C. No action, other than a statement of Council Members' intent to address the matter in the future, points of order, or points of information will be taken by Council Members during an open forum.

D. The open forum is a limited public forum and all matters discussed in the open forum shall relate to the affairs of the City. No person shall be permitted to speak in open forum regarding items on that week's current agenda or the next week's advanced agenda, pending hearing items, or initiatives or referenda in a pending election. Individuals speaking during open forum shall address their comments to the Council President and shall not use profanity, engage in obscene speech, or make personal comment or verbal insults about any individual.

Rule 2.7 SERVICE ANIMALS AT CITY COUNCIL MEETINGS

A. For purposes of these Rules, only dogs that are individually trained to do work or perform tasks for a person with a disability are recognized as service animals. Dogs or other animals whose sole function is to provide comfort or emotional support do not qualify as service animals under these Rules. Service animals are permitted to accompany people with disabilities in City Council meetings, as well as all areas where members of the public are allowed to go.

B. Service animals must, at all times while present in a City Council meeting, be harnessed, leashed, or tethered, unless these devices interfere with the service animal's work or the individual's disability prevents using these devices, in which case, the individual must maintain control of the animal through voice, signal, or other effective controls.

Rule 2.15 PARTICIPATION OF MEMBERS OF THE PUBLIC IN COUNCIL MEETINGS

A. Members of the public may address the Council regarding the following items during the Council's legislative session: the consent agenda as a whole, first and final readings of regular and special budget ordinances, emergency ordinances, special consideration items, hearing items, and other items before the City Council requiring Council action, except those that are adjudicatory or solely administrative in nature. This rule shall not limit the public's right to speak on issues that are not part of the current or advanced agendas during open forum.

B. No member of the public may speak without first being recognized for that purpose by the chair. Except for named parties to an adjudicative hearing, a person may be required to sign a sign-up sheet and provide their city of residence as a condition of recognition. Council Members must be recognized by the chair for the purpose of obtaining the floor.

C. Each person speaking in a public Council meeting shall verbally identify themselves by name, city of residence, and, if appropriate, representative capacity.

D. Each speaker shall follow all written and verbal instructions so that verbal remarks are electronically recorded, and documents submitted for the record are identified and marked by the Clerk.

E. In order that evidence and expressions of opinion be included in the record and that decorum befitting a deliberative process be maintained, no modes of expression not provided by these rules, including but not limited to demonstrations, banners, signs, applause, profanity, vulgar language, or personal insults will be permitted.

F. A speaker asserting a statement of fact may be asked to document and identify the sources of the factual datum being asserted.

G. When addressing the Council, members of the public shall direct all remarks to the Council President, shall refrain from remarks directed personally to any Council Member or any other individual, and shall confine remarks to the matters that are specifically before the Council at that time.

H. Members of City Council staff may participate in public comment, including open forum, providing they are in compliance with the City of Spokane Code of Ethics and they do the following:

1. Announce at the beginning of their testimony that they are there in their personal capacity or their capacity as a member of a relevant board, commission, committee or community group;
2. Protect confidential information, including, but not limited to, confidential financial information and attorney-client communications;
3. Do not use, or be perceived to use, City funds, including giving testimony during paid work time, or City property, including using a City-issued computer or cell phone, in giving testimony.

I. When any person, including members of the public, City staff, and others, are addressing the Council, Council Members shall observe the same decorum and process, as the rules require among the members *inter se*. That is, a Council Member shall not engage the person addressing the Council in colloquy but shall speak only when granted the floor by the Council President. All persons and/or Council Members shall not interrupt one another. The duty of mutual respect set forth in Rule 1.2 and the rules governing debate set forth in *Robert's Rules of Order, newly revised*, shall extend to all speakers before the City Council. The City Council's Director of Policy and Government Relations and/or City Attorney shall, with the assistance of Council staff, assist the Council President to ensure that all individuals desiring to speak shall be identified, appropriately recognized, and provided the opportunity to speak.

Rule 2.16 PUBLIC TESTIMONY REGARDING LEGISLATIVE AGENDA ITEMS – TIME LIMITS

A. The City Council shall take public testimony on all matters included on its legislative agenda as described at Rule 2.15(A), with those exceptions stated in Rule 2.16(B). Public testimony shall be limited to the final Council action, except that public testimony shall be allowed at the first reading of ordinances. Public testimony shall be limited to three (3) minutes per speaker unless the time limit is adjusted by a majority vote of the Council. The chair may allow additional time if the speaker is asked to respond to questions from the Council. Public testimony and consideration of an item may be extended to a subsequent meeting by a majority vote of the Council.

B. No public testimony shall be taken on amendments to consent or legislative agenda items, or solely procedural, parliamentary, or administrative matters of the Council.

C. Public testimony will be taken on consent and legislative items that are moved to Council's regular briefing session or study session unless a majority of Council votes otherwise during the meeting in which the items are moved.

D. For legislative or hearing items that may affect an identifiable individual, association, or group, the following procedure may be implemented at the discretion of the Council President:

1. Following an assessment by the chair of factors such as complexity of the issue(s), the apparent number of people indicating a desire to testify, representation by designated spokespersons, etc., the chair shall, in the absence of objection by the majority of the Council present, impose the following procedural time limitations for taking public testimony regarding legislative matters:

a. There shall be up to fifteen (15) minutes for staff, board, or commission presentation of background information, if any.

b. The designated representative of the proponents of the issue shall speak first and may include within their presentation the testimony of expert witnesses, visual displays, and any other reasonable methods of presenting the case. Up to thirty (30) minutes may be granted for the proponent's presentation. If there be more than one designated representative, they shall allocate the allotted time between or among themselves.

c. Following the presentation of the proponents of the issue, three (3) minutes shall be granted for any other person not associated with the designated representative of the proponents who wishes to speak on behalf of the proponent's position.

d. The designated representative, if any, of the opponents of the issue shall speak following the

presentation of the testimony of expert witnesses, visual displays, and any other reasonable methods of presenting the case. The designated representative(s) of the opponents shall have the same amount of time which was allotted to the proponents.

e. Following the presentation by the opponents of the issue, three (3) minutes shall be granted for any other person not associated with the designated representative of the opponents who wishes to speak on behalf of the opponents' position.

f. Up to ten (10) minutes of rebuttal time may be granted to the designated representative for each side, the proponents speaking first, the opponents speaking second.

2. In the event the party or parties representing one side of an issue has a designated representative and the other side does not, the chair shall publicly ask the unrepresented side if they wish to designate one or more persons to utilize the time allotted for the designated representative. If no such designation is made, each person wishing to speak on behalf of the unrepresented side shall be granted three (3) minutes to present their position, and no additional compensating time shall be allowed due to the fact that the side has no designated representative.

3. In the event there appears to be more than two groups wishing to advocate their distinct positions on a specific issue, the chair may grant the same procedural and time allowances to each group or groups, as stated previously.

4. In the event that the side for which individuals wish to speak is not identified, those wishing to give testimony shall be granted three (3) minutes to present their position after all sides have made their initial presentations and before each side's rebuttal period.

E. The time taken for staff or Council Member questions and responses thereto shall be in addition to the time allotted for any individual or designated representative's testimony.

F. Testimony may also be submitted by mail to City Council Office, Spokane City Hall, 808 W. Spokane Falls Blvd., Spokane, WA, 99201, by email to all Council Members, or via the Contact form on the Council's website.[1]

[1] https://my.spokanecity.org/citycouncil/members/

THE CITY OF SPOKANE

CURRENT COUNCIL AGENDA

MEETING OF MONDAY, OCTOBER 10, 2022

MISSION STATEMENT

TO DELIVER EFFICIENT AND EFFECTIVE SERVICES THAT FACILITATE ECONOMIC OPPORTUNITY AND ENHANCE QUALITY OF LIFE.

MAYOR NADINE WOODWARD
COUNCIL PRESIDENT BREEAN BEGGS
COUNCIL MEMBER JONATHAN BINGLE
COUNCIL MEMBER MICHAEL CATHCART
COUNCIL MEMBER LORI KINNEAR
COUNCIL MEMBER KAREN STRATTON
COUNCIL MEMBER BETSY WILKERSON
COUNCIL MEMBER ZACK ZAPPONE

CITY COUNCIL CHAMBERS
CITY HALL
808 W. SPOKANE FALLS BLVD.
SPOKANE, WA 99201

City of Spokane Guest Wireless access for Council Chambers for October 10, 2022:

User Name: **COS Guest**
Password: **LCZszq8Z**

Please note the space in user name.
Both user name and password are case sensitive.

LAND ACKNOWLEDGEMENT

We acknowledge that we are on the unceded land of the Spokane people. And that these lands were once the major trading center for the Spokanes as they shared this place and welcomed other area tribes through their relations, history, trade, and ceremony. We also want to acknowledge that the land holds the spirit of the place, through its knowledge, culture, and all the original peoples Since Time Immemorial.

As we take a moment to consider the impacts of colonization may we also acknowledge the strengths and resiliency of the Spokanes and their relatives. As we work together making decisions that benefit all, may we do so as one heart, one mind, and one spirit.

We are grateful to be on the shared lands of the Spokane people and ask for the support of their ancestors and all relations. We ask that you recognize these injustices that forever changed the lives of the Spokane people and all their relatives.

We agree to work together to stop all acts of continued injustices towards Native Americans and all our relatives. It is time for reconciliation. We must act upon the truths and take actions that will create restorative justice for all people.

Adopted by Spokane City Council on the 22nd day of March, 2021
via Resolution 2021-0019

BRIEFING AND LEGISLATIVE SESSIONS

The Briefing Session is open to the public, but will be a workshop meeting. Discussion will be limited to Council Members and appropriate Staff and Counsel. Pursuant to Council Rule 2.16.C, public testimony will be taken on consent and legislative items that are moved to Council's regular Briefing Session unless a majority of Council votes otherwise during the meeting in which the items are moved. The Legislative Session is also open to the public and public comment will be taken on Legislative Session items, except those that are adjudicatory or solely administrative in nature. Following the conclusion of the Legislative Agenda, an Open Forum will be held unless a majority of Council Members vote otherwise. Please see additional Open Forum information that appears at the end of the City Council agenda.

SPOKANE CITY COUNCIL BRIEFING SESSIONS (BEGINNING AT 3:30 P.M. EACH MONDAY) AND LEGISLATIVE SESSIONS (BEGINNING AT 6:00 P.M. EACH MONDAY) ARE BROADCAST LIVE ON CITY CABLE CHANNEL FIVE AND STREAMED LIVE ON THE CHANNEL FIVE WEBSITE. THE SESSIONS ARE REPLAYED ON CHANNEL FIVE ON THURSDAYS AT 6:00 P.M. AND FRIDAYS AT 10:00 A.M.

ADDRESSING THE COUNCIL

- **No member of the public may speak without first being recognized for that purpose by the Chair. Except for named parties to an adjudicative hearing, a person may be required to sign a sign-up sheet and provide their city of residence as a condition of recognition. Council Members must be recognized by the chair for the purpose of obtaining the floor.**
- **Each person speaking at the public microphone shall verbally identify themselves by name, city of residency and, if appropriate, representative capacity.**
- **Each speaker shall follow all written and verbal instructions so that verbal remarks are electronically recorded, and documents submitted for the record are identified and marked by the Clerk. (If you are submitting letters or documents to the Council Members, please provide a minimum of ten copies via the City Clerk. The City Clerk is responsible for officially filing and distributing your submittal.)**
- **In order that evidence and expressions of opinion be included in the record and that decorum befitting a deliberative process be maintained, no modes of expression including but not limited to demonstrations, banners, signs, applause, profanity, vulgar language, or personal insults will be permitted.**
- **A speaker asserting a statement of fact may be asked to document and identify the source of the factual datum being asserted.**
- **When addressing the Council, members of the public shall direct all remarks to the Council President, shall refrain from remarks directed personally to any Council Member or any other individual, and shall continue to the matters that are specifically before the Council at that time.**
- **Members of the City Council staff may participate in public comment, including open forum, providing they are in compliance with the City of Spokane Code of Ethics and they follow the steps outlined in the City Council Rules of Procedure.**

SPEAKING TIME LIMITS: **Unless the time limit is adjusted by a majority vote of the Council, each person addressing the Council shall be limited to a three-minute speaking time. The chair may allow additional time if the speaker is asked to respond to questions from the Council. Public testimony and consideration of an item may be extended to a subsequent meeting by a majority vote of the Council. Note: No public testimony shall be taken on amendments to consent or legislative agenda items, or solely procedural, parliamentary, or administrative matters of the Council.**

CITY COUNCIL AGENDA: **The City Council Advance and Current Agendas may be obtained prior to Council Meetings by accessing the City website at https://my.spokanecity.org.**

BRIEFING SESSION

(3:30 p.m.)
(Council Chambers Lower Level of City Hall)
(No Public Testimony Taken)

ROLL CALL OF COUNCIL

INTERVIEWS OF NOMINEES TO BOARDS AND COMMISSIONS

COUNCIL OR STAFF REPORTS OF MATTERS OF INTEREST

ADVANCE AGENDA REVIEW (Staff or Council Member briefings and discussion)

APPROVAL BY MOTION OF THE ADVANCE AGENDA

CURRENT AGENDA REVIEW (Presentation of any new background information and discussion of any adjustments)

EXECUTIVE SESSION

(Closed Session of Council)
(Executive Session may be held or reconvened during the 6:00 p.m. Legislative Session)

LEGISLATIVE SESSION

(6:00 P.M.)
(Council Reconvenes in Council Chamber)

PLEDGE OF ALLEGIANCE

WORDS OF INSPIRATION AND SPECIAL INTRODUCTIONS

ROLL CALL OF COUNCIL

COUNCIL AND COMMITTEE REPORTS
(Committee Reports for City Council Standing Committees and other Boards and Commissions)

PROCLAMATIONS AND SALUTATIONS

REPORTS FROM NEIGHBORHOOD COUNCILS AND/OR OTHER CITY-SPONSORED COMMUNITY ORGANIZATIONS

ANNOUNCEMENTS
(Announcements regarding Changes to the City Council Agenda)

NO BOARDS AND COMMISSIONS APPOINTMENTS

❖ ANNUAL MAYORAL STATEMENT OF THE CONDITIONS AND AFFAIRS OF THE CITY

ADMINISTRATIVE REPORT

CONSENT AGENDA

	REPORTS, CONTRACTS AND CLAIMS	RECOMMENDATION	
1.	Value Blanket Renewal 2 of 4 with Helfrich Brothers Boiler Works, Inc. (Lawrence, MA) for the purchase of boiler tubes for use at the Waste to Energy Facility from November 1, 2022 through Oct. 31, 2023–total cost not to exceed $1,900,000 (incl. tax). (Council Sponsors: Council Member Kinnear)	Approve	OPR 2020-0670 ITB 5313-20
2.	Contract Renewal 3 of 4 with Bay Valve Service, LLC (Longview, WA) for onsite valve repair services at the Waste to Energy Facility from January 1, 2023 through December 31, 2023–not to exceed $325,000 (incl. tax). (Council Sponsor: Council Member Kinnear)	Approve	OPR 2019-0957 PW ITB 5133-19
3.	Contract with Deeco, Inc. (Raleigh, NC) for air emissions compliance testing at the Waste to Energy Facility from January 1, 2023 through December 31, 2023–not to exceed $135,278 (excluding tax). (Council Sponsor: Council Member Kinnear)	Approve	OPR 2022-0709 IRFP 5616-22
4.	Contract Renewal 1 of 4 with Knight Construction & Supply, Inc. (Deer Park, WA) for mechanical repairs at the Waste to Energy Facility from November 1, 2022 through October 31, 2023–not to exceed $2,200,000 (incl. tax.)	Approve	OPR 2021-0716 PW ITB 5506-21
5.	Contract with Knight Construction & Supply, Inc. (Deer Park, WA) for emergency repair of the tipping floor at the Waste to Energy Facility–not to exceed $827,310 (plus tax). (Relates to Special Budget Ordinance C36291) (Council Sponsor: Council Member Kinnear)	Approve	OPR 2022-0710

6.	**Amendment to Consultant Agreement with Parametrix, Inc. (Spokane) for On-Call Civil Engineering Services for 2021-2023 non-federal projects—additional $600,000. Total contract amount: $1,200,000. (Council Sponsor: Council Member Kinnear)**	**Approve**	**OPR 2021-0527 ENG 2021090**
7.	**Extension 3 of 3 and Amendment 1 of the Amended Water Supply Agreement with the City of Airway Heights extending the agreement through June 15, 2026, and providing for increased collaboration as well as reimbursement to the City of Spokane for water modeling and analysis in relation to Airway Heights water infrastructure analysis—$87,844.72. (Council Sponsors: Council President Beggs and Council Member Bingle)**	**Approve**	**OPR 1984-0475**
8.	**Three-year Personal Services Agreement with ALS Group USA Corp., (Houston, TX) to provide specialized testing of wastewater and stormwater for the Riverside Park Water Reclamation Facility from October 17, 2022 through October 18, 2025—not to exceed $221,520 (plus tax) ($73,840 annually). (Council Sponsor: Council Member Kinnear)**	**Approve**	**OPR 2022-0711**
9.	**Public Works Agreement with Corrosion Companies (Woshougal, WA) for hypochloride tank repairs and modifications at the Riverside Park Water Reclamation Facility from October 1, 2022 through December 31, 2022—$72,859 (plus tax). (Council Sponsor: Council Member Kinnear)**	**Approve**	**OPR 2022-0712**
10.	**Outside Counsel Contract Amendment with Pacifica Law Group (Seattle, WA) to provide additional legal services and advice regarding the lawsuit of Lonnie Tofsrud v. City of Spokane, Spokane Superior Court Cause No. 22-2-000714-32—$50,000. Total contract amount: $100,000. (Council Sponsor: Council Member Kinnear)**	**Approve**	**OPR 2022-0297**
11.	**Report of the Mayor of pending:**	**Approve & Authorize Payments**	
	a. Claims and payments of previously approved obligations, including those of Parks and Library, through September 30, 2022, total $4,446,000.10, with Parks and Library claims approved by their respective boards. Warrants excluding Parks and Library total $3,990,377.43.		**CPR 2022-0002**

	b. Payroll claims of previously approved obligations through October 1, 2022: $14,474,545.56.		**CPR 2022-0003**
12.	**City Council Meeting Minutes: September 26 and October 6, 2022.**	**Approve All**	**CPR 2022-0013**

LEGISLATIVE AGENDA

SPECIAL BUDGET ORDINANCES

(Require Five Affirmative, Recorded Roll Call Votes)

Ordinances amending Ordinance No. C36161 passed by the City Council December 13, 2021, and entitled, "An Ordinance adopting the Annual Budget of the City of Spokane for 2022, making appropriations to the various funds of the City of Spokane government for the fiscal year ending December 31, 2022, and providing it shall take effect immediately upon passage," and declaring an emergency and appropriating funds in:

The following item (ORD C36277) has been deferred to the November 7, 2022, Agenda:

~~ORD C36277~~ **~~General Fund~~**
~~1) Add one classified Clerk II position (from 2 to 3) and increase the associated appropriation for salary and benefits in the Police department by $14,909.~~
~~2) Decrease the appropriation for a Program Professional position in the Police department by $14,909.~~
~~A) There is no change to the overall appropriation level in the General Fund.~~
~~1) Add one classified Business Analyst II position (from 0 to 1) and increase the associated appropriation for salary and benefits in the Police department by $21,924.~~
~~B) This is an increase to the overall appropriation level in the General Fund.~~

~~(This action arises from the need to increase staffing at the downtown precinct and in Police IT.) (Deferred from September 26, 2022, Agenda) (Council Sponsors: Council Members Cathcart and Bingle)~~

ORD C36290 **Solid Waste Fund**
1) Increase appropriation by $172,300.
2) The increase in appropriation is provided solely for the purchase and installation of a new air dryer which shall be funded from unappropriated fund balance.
(A) This is an increase to the overall appropriation level in the Solid Waste Fund.

(This action arises from the need to mitigate months-long lead times.) (Council Sponsors: Council Members Kinnear and Wilkerson)

ORD C36291 **Solid Waste Fund**
1) Increase appropriation by $827,310.
2) The increase in appropriation is provided solely for repairs to the tipping floor which shall be funded from unappropriated fund balance.
(A) This is an increase to the overall appropriation level in the Solid Waste Fund.

(This action arises from the need to repair substantial damage to the WTE tipping floor.) (Relates to Consent Agenda Item No. 5)(Council Sponsors: Council Members Kinnear and Wilkerson)

ORD C36292 **Solid Waste Fund**
1) Increase appropriation by $1,100,000.
2) The increase in appropriation is provided solely for the purchase of parts and supplies which shall be funded from unappropriated fund balance.
(A) This is an increase to the overall appropriation level in the Solid Waste Fund.

(This action arises from the need to mitigate months-long lead times.) (Council Sponsors: Council Members Kinnear and Wilkerson)

ORD C36293 **Solid Waste Fund**
1) Increase appropriation by $500,000.
2) The increase in appropriation is provided solely for transportation and disposal services which shall be funded from unappropriated fund balance.
(A) This is an increase to the overall appropriation level in the Solid Waste Fund.

(This action arises from the need to meet tonnage estimates through the end of the year.) (Council Sponsors: Council Members Kinnear and Wilkerson)

NO EMERGENCY ORDINANCES

RESOLUTIONS

(Require Four Affirmative, Recorded Roll Call Votes)

RES 2022-0090 **Adopting the 2022 Parks and Natural Lands Master Plan. (Council Sponsors: Council Members Stratton and Zappone)**

NO FINAL READING ORDINANCES

NO FIRST READING ORDINANCES

NO SPECIAL CONSIDERATIONS

NO HEARINGS

OPEN FORUM

At each meeting after the conclusion of the legislative agenda, the Council shall hold an open public comment period until 9:30 p.m., which may be extended by motion. Each speaker is limited to no more than three minutes. In order to participate in Open Forum, you must sign up by 6:00 p.m. A sign-up form will be available on the day of the meeting from 5:00-6:00 p.m. outside of Council Chambers for in-person attendees. Those wishing to comment virtually can sign up between 5:00-6:00 p.m. at https://forms.gle/Vd7n381x3seaL1NW6. (If you are unable to access the form by clicking the hyperlink, please copy and paste the link address into your browser window.) Instructions for virtual participation are provided on the form when you sign up. The Open Forum is a limited public forum; all matters discussed in the open forum shall relate to the affairs of the City and items of interest not relating to the Current or Advance Agendas, pending hearing items, or initiatives or referenda in a pending election. Individuals speaking during the open forum shall address their comments to the Council President and shall not use profanity, engage in obscene speech, or make personal comment or verbal insults about any individual.

ADJOURNMENT

The October 10, 2022, Regular Legislative Session of the City Council is adjourned to October 17, 2022.

NOTES

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	9/28/2022
		Clerk's File #	OPR 2020-0670
		Renews #	
Submitting Dept	SOLID WASTE DISPOSAL	Cross Ref #	
Contact Name/Phone	DAVID PAINE 625-6878	Project #	
Contact E-Mail	DPAINE@SPOKANECITY.ORG	Bid #	ITB 5313-20
Agenda Item Type	Purchase w/o Contract	Requisition #	VALUE BLANKET
Agenda Item Name	4490 VALUE BLANKET FOR THE PURCHASE OF BOILER TUBES AT THE WTE		

Agenda Wording

Value blanket renewal #2 of 4 with Helfrich Brothers Boiler Works, Inc. (Lawrence, MA) for the purchase of boiler tubes for use at the WTE from Nov. 1, 2022 through Oct. 31, 2023 with a total cost not to exceed $900,000.00 including tax.

Summary (Background)

Prefabricated boiler tubes are a necessary item to have available on-site so that worn tubes can be replaced quickly in the event of a failure or during scheduled outages. On July 30, 2020, based on their response to ITB 5313-20, Helfrich Brothers Boiler Works, Inc. was awarded the initial one-year value blanket with the option of four (4) additional one-year renewals. This will be the second renewal.

Lease? NO Grant related? NO Public Works? NO

Fiscal Impact		Budget Account
Expense	$ 900,000	# 4490-44100-37148-53210-34002
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	AVERYT, CHRIS	Study Session\Other	PIES 9/26
Division Director	FEIST, MARLENE	Council Sponsor	CM Kinnear
Finance	ALBIN-MOORE, ANGELA	Distribution List	
Legal	HARRINGTON, MARGARET	mdorgan@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	jsalstrom@spokanecity.org	
Additional Approvals		tprince@spokanecity.org	
Purchasing	PRINCE, THEA	rrinderle@spokanecity.org	

Committee Agenda Sheet
Public Infrastructure, Environment and Sustainability

Submitting Department	Solid Waste Disposal
Contact Name & Phone	David Paine, 625-6878
Contact Email	dpaine@spokanecity.org
Council Sponsor(s)	CM Lori Kinnear
Select Agenda Item Type	■ Consent ☐ Discussion Time Requested: _____
Agenda Item Name	Value blanket renewal for the purchase of boiler tubes at the WTE.
Summary (Background)	Prefabricated boiler tubes are a necessary item to have available on-site at the Waste to Energy Facility so that worn tubes can be replaced quickly in the event of a failure or during scheduled maintenance outages. On July 30, 2020 bidding closed on ITB 5313-20 for an annual supply of these boiler tubes, including the fabrication of u-bends, as-needed for the WTE Facility. Helfrich Brothers Boiler Works, Inc., of Lawrence, MA, was the lowest cost, responsible bidder. Other responses were received from The Babcock & Wilcox Company, Boiler Tube Company of America and Technology International, Inc. The initial value blanket with Helfrich Brothers was from Nov. 1, 2020 through Oct. 31, 2021 with a cost not to exceed $650,000.00, including taxes and had the option of four (4) additional one-year renewals. This will be the second of those renewals from Nov. 1, 2022 through Oct. 31, 2023 for an additional cost not to exceed $1.9 million including taxes. The additional cost is due to price increases as well as the needed purchase of extra tubing required for a changeout of the boiler superheater pendants that is in the 2023 capital plan.
Proposed Council Action & Date:	Consent to proceed on 9/26/22.

Fiscal Impact:
Total Cost: $1,900,000.00
Approved in current year budget? ■ Yes ☐ No ☐ N/A

Funding Source ☐ One-time ■ Recurring
Specify funding source: 2022/2023 SWD Budget

Expense Occurrence ☐ One-time ■ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts

What impacts would the proposal have on historically excluded communities?

N/A

How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities?

N/A

How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?

Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others?

This contract extension supports the COS WTE's ability to maintain and operate the facility in the most effective, efficient, and compliant manner. This contract supports efforts outline in the COS WTE Capital Improvement Plan, the Comprehensive Plan and the Sustainable Action Plan.

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	9/28/2022
		Clerk's File #	OPR 2019-0957
		Renews #	
Submitting Dept	SOLID WASTE DISPOSAL	Cross Ref #	
Contact Name/Phone	DAVID PAINE 625-6878	Project #	
Contact E-Mail	DPAINE@SPOKANECITY.ORG	Bid #	PW ITB 5133-19
Agenda Item Type	Contract Item	Requisition #	CR 24015
Agenda Item Name	4490 CONTRACT RENEWAL FOR ONSITE VALVE REPAIRS AT THE WTE		

Agenda Wording

Contract renewal #3 of 4 with Bay Valve Service, LLC (Longview, WA) for onsite valve repair services at the WTE from Jan. 1, 2023 through Dec. 31, 2023 with a cost not to exceed 325,000.00 including tax.

Summary (Background)

The WTE has many valves that are critical to the operation of the plant. On-site maintenance is required for safe and efficient operation. A valve failure could result in a plant shutdown. In 2019, Bay Valve Service, LLC. was the only response received to PW ITB 5133-19 for these services and was awarded a one year contract with the option of four (4) additional one-year renewals. This will be the third renewal and rates will remain unchanged.

Lease? NO Grant related? NO Public Works? YES

Fiscal Impact		Budget Account
Expense	$ 325,000.00	# 4490-44100-37148-54803-34002
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	AVERYT, CHRIS	Study Session\Other	PIES 9/26
Division Director	FEIST, MARLENE	Council Sponsor	CM Kinnear
Finance	ALBIN-MOORE, ANGELA	Distribution List	
Legal	HARRINGTON, MARGARET	mdorgan@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	jsalstrom@spokanecity.org	
Additional Approvals		tprince@spokanecity.org	
Purchasing	PRINCE, THEA	rrinderle@spokanecity.org	
		DocuSign: Mike Dombek, Branch Manager, mdombek@iss-na.com	

Committee Agenda Sheet
Public Infrastructure, Environment and Sustainability

Submitting Department	Solid Waste Disposal
Contact Name & Phone	David Paine, 625-6878
Contact Email	dpaine@spokanecity.org
Council Sponsor(s)	CM Lori Kinnear
Select Agenda Item Type	■ Consent ☐ Discussion Time Requested: _____
Agenda Item Name	Contract renewal for on-site valve repair services at the WTE.
Summary (Background)	The Waste to Energy Facility has many types of valves which are critical to the operation of the plant. On-site maintenance is required for safe and efficient operation. Any number of valve failures could result in a plant shutdown. On September 30, 2019 bidding closed to PW ITB 5133-19 for these valve repair services and Bay Valve Service, LLC of Longview, WA was the only response received. The initial contract was from Jan. 1, 2020 through Dec. 31, 2020 with the option of four (4) additional one-year renewals and an annual cost not to exceed $300,000.00 including taxes. This will be the third renewal spanning from January 1, 2023 through December 31, 2023 with an additional cost not to exceed $325,000.00 including tax.
Proposed Council Action & Date:	Consent to proceed on 9/26/22

Fiscal Impact:
Total Cost: $325,000.00
Approved in current year budget? ■ Yes ☐ No ☐ N/A

Funding Source ☐ One-time ■ Recurring
Specify funding source: 2022 SWD Budget

Expense Occurrence ☐ One-time ■ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts
What impacts would the proposal have on historically excluded communities? N/A
How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities? N/A
How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?
Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others? This contract extension supports the COS WTE's ability to maintain and operate the facility in the most effective, efficient, and compliant manner. This contract supports efforts outline in the COS WTE Capital Improvement Plan, the Comprehensive Plan and the Sustainable Action Plan.

City Clerk's No. 2019-0957

City of Spokane

CONTRACT RENEWAL
3 OF 4

Title: ON-SITE VALVE REPAIR SERVICES

This Contract Renewal is made and entered into by and between the **CITY OF SPOKANE** as ("City"), a Washington municipal corporation, and **BAY VALVE SERVICE, LLC,** whose address is 213 Douglas Street, Longview, Washington 98632 as ("Contractor"), individually hereafter referenced as a "party", and together as the "parties".

WHEREAS, the parties entered into a Contract wherein the Contractor agreed to perform On-Site Valve Repair Services for the City; and

WHEREAS, the original Contract provided for 4 additional one-year renewals with this being the third of those renewals, being formally renewed by this written Contract Renewal document; and

NOW, THEREFORE, in consideration of these terms, the parties mutually agree as follows:

1. CONTRACT DOCUMENTS.
The original Contract, dated November 7, 2019 and November 20, 2019, any previous amendments, renewals and / or extensions / thereto, are incorporated by reference into this document as though written in full and shall remain in full force and effect except as provided herein.

2. EFFECTIVE DATE.
This Contract Renewal shall become effective on January 1, 2023 and shall end December 31, 2023.

3. COMPENSATION.
The City shall pay an estimated maximum annual cost not to exceed **THREE HUNDRED TWENTY-FIVE THOUSAND AND 00/100** (**$325,000.00**), in accordance with Contractors 2023 Rates attached hereto, for everything furnished and done under this Contract Renewal. This is the maximum amount to be paid under this Renewal, and shall not be exceeded without the prior written authorization of the City, memorialized with the same formality as the original Contract and this Renewal document.

4. DEBARMENT AND SUSPENSION.
The Contractor has provided its certification that it is in compliance with and shall not contract with individuals or organizations which are debarred, suspended, or otherwise excluded from or

ineligible from participation in Federal Assistance Programs under Executive Order 12549 and "Debarment and Suspension", codified at 29 CFR part 98.

IN WITNESS WHEREOF, in consideration of the terms, conditions and covenants contained, or attached and incorporated and made a part, the parties have executed this Contract Renewal by having legally-binding representatives affix their signatures below.

BAY VALVE SERVICE, LLC.	**CITY OF SPOKANE**
By_____	By_____
Signature Date	Signature Date
_____	_____
Type or Print Name	Type or Print Name
_____	_____
Title	Title
Attest:	Approved as to form:
_____	_____
City Clerk	Assistant City Attorney

Attachments that are part of this Agreement:

Bay Valve Service, LLC's 2023 Rates
Certificate of Debarment
22-174

ATTACHMENT A

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. The undersigned (i.e., signatory for the Subrecipient / Contractor / Consultant) certifies, to the best of its knowledge and belief, that it and its principals:

   a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
   b. Have not within a three-year period preceding this contract been convicted or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice;
   c. Are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and,
   d. Have not within a three-year period preceding this contract had one or more public transactions (federal, state, or local) terminated for cause or default.

2. The undersigned agrees by signing this contract that it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction.

3. The undersigned further agrees by signing this contract that it will include the following clause, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions:

   Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions

   1. The lower tier contractor certified, by signing this contract that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

   2. Where the lower tier contractor is unable to certify to any of the statements in this contract, such contractor shall attach an explanation to this contract.

4. I understand that a false statement of this certification may be grounds for termination of the contract.

Name of Subrecipient / Contractor / Consultant (Type or Print)	Program Title (Type or Print)
Name of Certifying Official (Type or Print) Title of Certifying Official (Type or Print)	Signature Date (Type or Print)

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	9/28/2022
		Clerk's File #	OPR 2022-0709
		Renews #	
Submitting Dept	SOLID WASTE DISPOSAL	Cross Ref #	
Contact Name/Phone	DAVID PAINE 625-6878	Project #	
Contact E-Mail	DPAINE@SPOKANECITY.ORG	Bid #	IRFP 5616-22
Agenda Item Type	Contract Item	Requisition #	CR 24014
Agenda Item Name	4490 CONTRACT FOR AIR EMISSIONS COMPLIANCE TESTING		

Agenda Wording

Contract with Deeco Inc. (Raleigh, NC) for air emissions compliance testing at the Waste to Energy Facility from Jan. 1, 2023 through Dec. 31, 2023 with a cost not to exceed $135,278.00 excluding tax.

Summary (Background)

Annual emissions testing, including the annual Relative Accuracy Test Audit (RATA) of the continuous emission monitoring system, is required by the WTE's operating permits. On July 29, 2022, bidding closed on IRFP #5616-22 for these services. Two responses were received; DEECO, Inc. (Raleigh, NC) and Alliance Tech Group (Salt Lake City, UT). DEECO, Inc. was determined to be the most qualified respondent. The contract award would be for one year with the option of four (4) one-year renewals.

Lease? NO Grant related? NO Public Works? NO

Fiscal Impact		Budget Account
Expense	$ 135,278.00	# 4490-44100-37148-54940-99999
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	AVERYT, CHRIS	Study Session\Other	PIES 9/26
Division Director	FEIST, MARLENE	Council Sponsor	CM Kinnear
Finance	ALBIN-MOORE, ANGELA	Distribution List	
Legal	HARRINGTON, MARGARET	mdorgan@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	jsalstrom@spokanecity.org	
Additional Approvals		tprince@spokanecity.org	
Purchasing	PRINCE, THEA	rrinderle@spokanecity.org	
		DocuSign: Marc Hamilton, President, deeco@deeco.com	

Committee Agenda Sheet
Public Infrastructure, Environment and Sustainability

Submitting Department	Solid Waste Disposal
Contact Name & Phone	David Paine, 625-6878
Contact Email	dpaine@spokanecity.org
Council Sponsor(s)	CM Lori Kinnear
Select Agenda Item Type	■ Consent ☐ Discussion Time Requested: _____
Agenda Item Name	Contract for air quality emission testing at the WTE.
Summary (Background)	Annual emissions testing, including the annual Relative Accuracy Test Audit (RATA) of the continuous emission monitoring system, is required by the operating permits for the WTE. On July 29, 2022, bidding closed on IRFP #5616-22 for these testing services. Two responses were received; DEECO, Inc. (Raleigh, NC) and Alliance Tech Group (Salt Lake City, UT). DEECO, Inc. was determined to be the most qualified and most cost effective respondent. The contract award would be for one year with the option of four (4) one-year renewals and will span from January 1, 2023 through December 31, 2023 with a total cost not to exceed $135,278.00.
Proposed Council Action & Date:	Consent to proceed with contract award on 9/26/22.

Fiscal Impact:

Total Cost: $135,278.00

Approved in current year budget? ■ Yes ☐ No ☐ N/A

Funding Source ☐ One-time ■ Recurring

Specify funding source: 2022 SWD Budget

Expense Occurrence ☐ One-time ■ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts

What impacts would the proposal have on historically excluded communities?

N/A

How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities?

N/A

How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?

Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others?

As part of its efforts to support current City Policies, the Comprehensive Plan and the Sustainable Action Plan the COS WTE conducts Annual Emissions Testing by a 3rd and independent party. This testing provides our City Leadership and the Citizens with the most up to date and accurate data supporting compliance with all Local, State and Federal Operating Guidelines and Regulations.

City Clerk's 2022-0709

City of Spokane

CONSULTANT AGREEMENT

Title: AIR EMISSIONS COMPLIANCE TEST PROGRAM

This Consultant Agreement is made and entered into by and between the **CITY OF SPOKANE** as ("City"), a Washington municipal corporation, and **DEECO, INC.**, whose address is 3404 Lake Woodard Road, Raleigh, North Carolina 27604 as ("Consultant"), individually hereafter referenced as a "party", and together as the "parties".

WHEREAS, the purpose of this Agreement is to conduct the Air Emissions Compliance Test Program at the Spokane Waste-to-Energy Facility, and

WHEREAS, the Consultant was selected from IRFP 5616-22.

NOW, THEREFORE, in consideration of the terms, conditions, covenants and performance of the Scope of Work contained herein, the City and Consultant mutually agree as follows:

1. TERM OF AGREEMENT.
The term of this Agreement begins on January 1, 2023, and ends on December 31, 2023, unless amended by written agreement or terminated earlier under the provisions. This Agreement may be renewed on an annual basis by written agreement of the parties not to exceed four (4) additional one year renewals.

2. TIME OF BEGINNING AND COMPLETION.
The Consultant shall begin the work outlined in the "Scope of Work" ("Work") on the beginning date, above. The City will acknowledge in writing when the Work is complete. Time limits established under this Agreement shall not be extended because of delays for which the Consultant is responsible, but may be extended by the City, in writing, for the City's convenience or conditions beyond the Consultant's control.

3. SCOPE OF WORK.
The General Scope of Work for this Agreement is described in the City's Informal Request for Proposal, and in Consultant's Response dated July 25, 2022 which is attached as Exhibit B and made a part of this Agreement. In the event of a conflict or discrepancy in the contract documents, this City Agreement controls.

The Work is subject to City review and approval. The Consultant shall confer with the City periodically, and prepare and present information and materials (e.g. detailed outline of completed Work) requested by the City to determine the adequacy of the Work or Consultant's progress.

4. COMPENSATION.
Total annual compensation for Consultant's services under this Agreement shall not exceed **ONE HUNDRED THIRTY-FIVE THOUSAND TWO HUNDRED SEVENTY-EIGHT AND NO/100 DOLLARS ($135,278.00)**, excluding tax, if applicable, unless modified by a written amendment to this Agreement. This is the maximum amount to be paid under this Agreement for the work described in Section 3 above, and shall not be exceeded without the prior written authorization of the City in the form of an executed amendment to this Agreement.

5. PAYMENT.
The Consultant shall submit its applications for payment to Spokane Solid Waste Disposal, Administration Office, 2900 South Geiger Blvd., Spokane, Washington 99224. **Payment will be made via direct deposit/ACH** within thirty (30) days after receipt of the Consultant's application except as provided by state law. If the City objects to all or any portion of the invoice, it shall notify the Consultant and pay that portion of the invoice not in dispute. In that event, the parties shall immediately make every effort to settle the disputed amount.

6. REIMBURSABLES
The reimbursables under this Agreement are to be included, and considered part of the maximum amount not to exceed (above), and require the Consultant's submittal of appropriate documentation and actual itemized receipts, the following limitations apply.

A. City will reimburse the Consultant at actual cost for expenditures that are pre-approved by the City in writing and are necessary and directly applicable to the work required by this Contract provided that similar direct project costs related to the contracts of other clients are consistently accounted for in a like manner. Such direct project costs may not be charged as part of overhead expenses or include a markup. Other direct charges may include, but are not limited to the following types of items: travel, printing, cell phone, supplies, materials, computer charges, and fees of subconsultants.
B. The billing for third party direct expenses specifically identifiable with this project shall be an itemized listing of the charges supported by copies of the original bills, invoices, expense accounts, subconsultant paid invoices, and other supporting documents used by the Consultant to generate invoice(s) to the City. The original supporting documents shall be available to the City for inspection upon request. All charges must be necessary for the services provided under this Contract.
C. The City will reimburse the actual cost for travel expenses incurred as evidenced by copies of receipts (excluding meals) supporting such travel expenses, and in accordance with the City of Spokane Travel Policy, details of which can be provided upon request.
D. **Airfare**: Airfare will be reimbursed at the actual cost of the airline ticket. The City will reimburse for Economy or Coach Fare only. Receipts detailing each airfare are required.
E. **Meals:** Meals will be reimbursed at the Federal Per Diem daily meal rate for the city in which the work is performed. *Receipts <u>are not</u> required as documentation.* The invoice shall state "the meals are being billed at the Federal Per Diem daily meal rate", and shall detail how many of each meal is being billed (e.g. the number of breakfasts, lunches, and dinners). The City will not reimburse for alcohol at any time.
F. **Lodging:** Lodging will be reimbursed at actual cost incurred up to a maximum of the published General Services Administration (GSA) Index for the city in which the work is performed (*the current maximum allowed reimbursement amount can be provided upon request*). Receipts detailing each day / night lodging are required. The City will not reimburse for ancillary expenses charged to the room (e.g. movies, laundry, mini bar, refreshment center, fitness center, sundry items, etc.)
G. **Vehicle mileage**: Vehicle mileage will be reimbursed at the Federal Internal Revenue Service Standard Business Mileage Rate in affect at the time the mileage expense is

incurred. Please note: payment for mileage for long distances traveled will not be more than an equivalent trip round-trip airfare of a common carrier for a coach or economy class ticket.

H. **Rental Car:** Rental car expenses will be reimbursed at the actual cost of the rental. Rental car receipts are required for all rental car expenses. The City will reimburse for a standard car of a mid-size class or less. The City will not reimburse for ancillary expenses charged to the car rental (e.g. GPS unit).

I. **Miscellaneous Travel** (e.g. parking, rental car gas, taxi, shuttle, toll fees, ferry fees, etc.): Miscellaneous travel expenses will be reimbursed at the actual cost incurred. Receipts are required for each expense of $10.00 or more.

J. **Miscellaneous other business expenses** (e.g. printing, photo development, binding): Other miscellaneous business expenses will be reimbursed at the actual cost incurred and may not include a markup. Receipts are required for all miscellaneous expenses that are billed.

Subconsultant: Subconsultant expenses will be reimbursed at the actual cost incurred and a four percent (4%) markup. Copies of all Subconsultant invoices that are rebilled to the City are required.

7. TAXES, FEES AND LICENSES.

A. Consultant shall pay and maintain in current status, all necessary licenses, fees, assessments, permit charges, etc. necessary to conduct the work included under this Agreement. It is the Consultant's sole responsibility to monitor and determine changes or the enactment of any subsequent requirements for said fees, assessments, or changes and to immediately comply.

B. Where required by state statute, ordinance or regulation, Consultant shall pay and maintain in current status all taxes necessary for performance. Consultant shall not charge the City for federal excise taxes. The City will furnish Consultant an exemption certificate where appropriate.

C. The Director of Finance and Administrative Services may withhold payment pending satisfactory resolution of unpaid taxes and fees due the City.

D. The cost of any permits, licenses, fees, etc. arising as a result of the projects included in this Agreement shall be included in the project budgets.

8. CITY OF SPOKANE BUSINESS LICENSE.

Section 8.01.070 of the Spokane Municipal Code states that no person may engage in business with the City without first having obtained a valid annual business registration. The Consultant shall be responsible for contacting the State of Washington Business License Services at www.dor.wa.gov or 360-705-6741 to obtain a business registration. If the Contractor does not believe it is required to obtain a business registration, it may contact the City's Taxes and Licenses Division at (509) 625-6070 to request an exemption status determination.

9. SOCIAL EQUITY REQUIREMENTS.

No individual shall be excluded from participation in, denied the benefit of, subjected to discrimination under, or denied employment in the administration of or in connection with this Agreement because of age, sex, race, color, religion, creed, marital status, familial status, sexual orientation including gender expression or gender identity, national origin, honorably discharged veteran or military status, the presence of any sensory, mental or physical disability, or use of a service animal by a person with disabilities. Consultant agrees to comply with, and to require that all subcontractors comply with, Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act, as applicable to the Consultant. Consultant shall seek inclusion of woman and minority business for subcontracting. A woman or minority business is

one that self-identifies to be at least 51% owned by a woman and/or minority. Such firms do not have to be certified by the State of Washington.

10. INDEMNIFICATION.
The Consultant shall indemnify, and hold the City and its officers and employees harmless from all claims, demands, or suits at law or equity asserted by third parties for bodily injury (including death) and/or property damage to the extent caused by the Consultant's negligence or willful misconduct under this Agreement, including attorneys' fees and litigation costs; provided that nothing herein shall require a Consultant to indemnify the City against and hold harmless the City from claims, demands or suits based solely upon the negligence of the City, its agents, officers, and employees. If a claim or suit is caused by or results from the concurrent negligence of the Consultant's agents or employees and the City, its agents, officers and employees, this indemnity provision shall be valid and enforceable to the extent of the negligence of the Consultant, its agents or employees. The Consultant specifically assumes liability and agrees to defend, indemnify, and hold the City harmless for actions brought by the Consultant's own employees against the City and, solely for the purpose of this indemnification and defense, the Consultant specifically waives any immunity under the Washington State industrial insurance law, or Title 51 RCW. The Consultant recognizes that this waiver was specifically entered into pursuant to the provisions of RCW 4.24.115 and was the subject of mutual negotiation. The indemnity and agreement to defend and hold the City harmless provided for in this section shall survive any termination or expiration of this agreement.

11. INSURANCE.
During the period of the Agreement, the Consultant shall maintain in force at its own expense, each insurance noted below with companies or through sources approved by the State Insurance Commissioner pursuant to RCW Title 48;

A. Worker's Compensation Insurance in compliance with RCW 51.12.020, which requires subject employers to provide workers' compensation coverage for all their subject workers and Employer's Liability Insurance in the amount of $1,000,000;

B. General Liability Insurance on an occurrence basis, with a combined single limit of not less than $1,000,000 each occurrence for bodily injury and property damage. It shall include contractual liability coverage for the indemnity provided under this agreement. It shall provide that the City, its officers and employees are additional insureds but only with respect to the Consultant's services to be provided under this Agreement; and

C. Automobile Liability Insurance with a combined single limit, or the equivalent of not less than $1,000,000 each accident for bodily injury and property damage, including coverage for owned, hired and non-owned vehicles.

There shall be no cancellation, material change, reduction of limits or intent not to renew the insurance coverage(s) without forty-five (45) days written notice from the Consultant or its insurer(s) to the City. As evidence of the insurance coverage(s) required by this Agreement, the Consultant shall furnish acceptable Certificates Of Insurance (COI) to the City at the time it returns this signed Agreement. The certificate shall specify the City of Spokane as "Additional Insured" specifically for Consultant's services under this Agreement, as well as all of the parties who are additional insureds, and include applicable policy endorsements, the –forty-five (45) day cancellation clause, and the deduction or retention level. The Consultant shall be financially responsible for all pertinent deductibles, self-insured retentions, and/or self-insurance.

12. DEBARMENT AND SUSPENSION.
The Consultant has provided its certification that it is in compliance with and shall not contract with individuals or organizations which are debarred, suspended, or otherwise excluded from or ineligible from participation in Federal Assistance Programs under Executive Order 12549 and "Debarment and Suspension", codified at 29 CFR part 98.

13. AUDIT.
Upon request, the Consultant shall permit the City and any other governmental agency ("Agency") involved in the funding of the Work to inspect and audit all pertinent books and records. This includes work of the Consultant, any subconsultant, or any other person or entity that performed connected or related Work. Such books and records shall be made available upon reasonable notice of a request by the City, including up to three (3) years after final payment or release of withheld amounts. Such inspection and audit shall occur in Spokane County, Washington, or other reasonable locations mutually agreed to by the parties. The Consultant shall permit the City to copy such books and records at its own expense. The Consultant shall ensure that inspection, audit and copying rights of the City is a condition of any subcontract, agreement or other arrangement under which any other persons or entity may perform Work under this Agreement.

14. INDEPENDENT CONSULTANT.
A. The Consultant is an independent Consultant. This Agreement does not intend the Consultant to act as a City employee. The City has neither direct nor immediate control over the Consultant nor the right to control the manner or means by which the Consultant works. Neither the Consultant nor any Consultant employee shall be an employee of the City. This Agreement prohibits the Consultant to act as an agent or legal representative of the City. The Consultant is not granted express or implied rights or authority to assume or create any obligation or responsibility for or in the name of the City, or to bind the City. The City is not liable for or obligated to pay sick leave, vacation pay, or any other benefit of employment, nor to pay social security or other tax that may arise from employment. The Consultant shall pay all income and other taxes as due. The Consultant may perform work for other parties; the City is not the exclusive user of the services that the Consultant provides.
B. If the City needs the Consultant to Work on City premises and/or with City equipment, the City may provide the necessary premises and equipment. Such premises and equipment are exclusively for the Work and not to be used for any other purpose.
C. If the Consultant works on the City premises using City equipment, the Consultant remains an independent Consultant and not a City employee. The Consultant will notify the City Project Manager if s/he or any other Workers are within ninety (90) days of a consecutive 36-month placement on City property. If the City determines using City premises or equipment is unnecessary to complete the Work, the Consultant will be required to work from its own office space or in the field. The City may negotiate a reduction in Consultant fees or charge a rental fee based on the actual costs to the City, for City premises or equipment.

15. KEY PERSONS.
The Consultant shall not transfer or reassign any individual designated in this Agreement as essential to the Work, nor shall those key persons, or employees of Consultant identified as to be involved in the Project Work be replaced, removed or withdrawn from the Work without the express written consent of the City, which shall not be unreasonably withheld. If any such individual leaves the Consultant's employment, the Consultant shall present to the City one or more individuals with greater or equal qualifications as a replacement, subject to the City's approval, which shall not be unreasonably withheld. The City's approval does not release the Consultant from its obligations under this Agreement.

16. ASSIGNMENT AND SUBCONTRACTING.
The Consultant shall not assign or subcontract its obligations under this Agreement without the City's written consent, which may be granted or withheld in the City's sole discretion. Any subcontract made by the Consultant shall incorporate by reference this Agreement, except as otherwise provided. The Consultant shall require that all subconsultants comply with the obligations and requirements of the subcontract. The City's consent to any assignment or subcontract does not release the consultant from liability or any obligation within this Agreement, whether before or after City consent, assignment or subcontract.

17. CITY ETHICS CODE.
A. Consultant shall promptly notify the City in writing of any person expected to be a Consultant Worker (including any Consultant employee, subconsultant, principal, or owner) and was a former City officer or employee within the past twelve (12) months.
B. Consultant shall ensure compliance with the City Ethics Code by any Consultant Worker when the Work or matter related to the Work is performed by a Consultant Worker who has been a City officer or employee within the past two (2) years.
C. Consultant shall not directly or indirectly offer anything of value (such as retainers, loans, entertainment, favors, gifts, tickets, trips, favors, bonuses, donations, special discounts, work or meals) to any City employee, volunteer or official that is intended, or may appear to a reasonable person to be intended, to obtain or give special consideration to the Consultant. Promotional items worth less than $25 may be distributed by the Consultant to a City employee if the Consultant uses the items as routine and standard promotional materials. Any violation of this provision may cause termination of this Agreement. Nothing in this Agreement prohibits donations to campaigns for election to City office, so long as the donation is disclosed as required by the election campaign disclosure laws of the City and of the State.

18. NO CONFLICT OF INTEREST.
Consultant confirms that the Consultant or workers have no business interest or a close family relationship with any City officer or employee who was or will be involved in the consultant selection, negotiation, drafting, signing, administration or evaluation of the Consultant's work. As used in this Section, the term Consultant includes any worker of the Consultant who was, is, or will be, involved in negotiation, drafting, signing, administration or performance of the Agreement. The term "close family relationship" refers to: spouse or domestic partner, any dependent parent, parent-in-law, child, son-in-law, daughter-in-law; or any parent, parent in-law, sibling, uncle, aunt, cousin, niece or nephew residing in the household of a City officer or employee described above.

19. ERRORS AND OMISSIONS, CORRECTIONS.
Consultant is responsible for professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, and other services furnished by or on the behalf of the Consultant under this Agreement in the delivery of a final work product. The standard of care applicable to Consultant's services will be the degree of skill and diligence normally employed by professional engineers or Consultants performing the same or similar services at the time said services are performed. The Final Work Product is defined as a stamped, signed work product. Consultant, without additional compensation, shall correct or revise errors or mistakes in designs, drawings, specifications, and/or other consultant services immediately upon notification by the City. The obligation provided for in this Section regarding acts or omissions resulting from this Agreement survives Agreement termination or expiration.

20. INTELLECTUAL PROPERTY RIGHTS.

A. Copyrights. The Consultant shall retain the copyright (including the right of reuse) to all materials and documents prepared by the Consultant for the Work, whether or not the Work is completed. The Consultant grants to the City a non-exclusive, irrevocable, unlimited, royalty-free license to use copy and distribute every document and all the materials prepared by the Consultant for the City under this Agreement. If requested by the City, a copy of all drawings, prints, plans, field notes, reports, documents, files, input materials, output materials, the media upon which they are located (including cards, tapes, discs, and other storage facilities), software program or packages (including source code or codes, object codes, upgrades, revisions, modifications, and any related materials) and/or any other related documents or materials developed solely for and paid for by the City to perform the Work, shall be promptly delivered to the City.

B. Patents: The Consultant assigns to the City all rights in any invention, improvement, or discovery, with all related information, including but not limited to designs, specifications, data, patent rights and findings developed with the performance of the Agreement or any subcontract. Notwithstanding the above, the Consultant does not convey to the City, nor does the City obtain, any right to any document or material utilized by the Consultant created or produced separate from the Agreement or was pre-existing material (not already owned by the City), provided that the Consultant has identified in writing such material as pre-existing prior to commencement of the Work. If pre-existing materials are incorporated in the work, the Consultant grants the City an irrevocable, non-exclusive right and/or license to use, execute, reproduce, display and transfer the pre-existing material, but only as an inseparable part of the work.

C. The City may make and retain copies of such documents for its information and reference with their use on the project. The Consultant does not represent or warrant that such documents are suitable for reuse by the City or others, on extensions of the project or on any other project, and the City releases the Consultant from liability for any unauthorized reuse of such documents.

21. CONFIDENTIALITY.

Notwithstanding anything to the contrary, City will maintain the confidentiality of Consultant's materials and information only to the extent that is legally allowed in the State of Washington. City is bound by the State Public Records Act, RCW Ch. 42.56. That law presumptively makes all records in the possession of the City public records which are freely available upon request by anyone. In the event that City gets a valid public records request for Consultant's materials or information and the City determines there are exemptions only the Consultant can assert, City will endeavor to give Consultant notice. Consultant will be required to go to Court to get an injunction preventing the release of the requested records. In the event that Consultant does not get a timely injunction preventing the release of the records, the City will comply with the Public Records Act and release the records.

22. DISPUTES.

Any dispute or misunderstanding that may arise under this Agreement, concerning the Consultant's performance, shall first be through negotiations, if possible, between the Consultant's Project Manager and the City's Project Manager. It shall be referred to the Director and the Consultant's senior executive(s). If such officials do not agree upon a decision within a reasonable period of time, either party may decline or discontinue such discussions and may then pursue the legal means to resolve such disputes, including but not limited to mediation, arbitration and/or alternative dispute resolution processes. Nothing in this dispute process shall mitigate the rights of the City to terminate the Agreement. Notwithstanding all of the above, if the City believes in good faith that some portion of the Work has not been completed satisfactorily, the City may require the Consultant to correct such work prior to the City payment.

The City will provide to the Consultant an explanation of the concern and the remedy that the City expects. The City may withhold from any payment otherwise due, an amount that the City in good faith finds to be under dispute, or if the Consultant provides no sufficient remedy, the City may retain the amount equal to the cost to the City for otherwise correcting or remedying the work not properly completed. Waiver of any of these rights is not deemed a future waiver of any such right or remedy available at law, contract or equity.

23. TERMINATION.

A. For Cause: The City or Consultant may terminate the Agreement if the other party is in material breach of this Agreement, and such breach has not been corrected to the other party's reasonable satisfaction in a timely manner. Notice of termination under this Section shall be given by the party terminating this Agreement to the other, not fewer than thirty (30) business days prior to the effective date of termination.

B. For Reasons Beyond Control of Parties: Either party may terminate this Agreement without recourse by the other where performance is rendered impossible or impracticable for reasons beyond such party's reasonable control, such as, but not limited to, an act of nature, war or warlike operation, civil commotion, riot, labor dispute including strike, walkout or lockout, except labor disputes involving the Consultant's own employees, sabotage, or superior governmental regulation or control. Notice of termination under this Section shall be given by the party terminating this Agreement to the other, not fewer than thirty (30) business days prior to the effective date of termination.

C. For Convenience: Either party may terminate this Agreement without cause, upon thirty (30) days written notice to the other party.

D. Actions upon Termination: if termination occurs not the fault of the Consultant, the Consultant shall be paid for the services properly performed prior to the actual termination date, with any reimbursable expenses then due, but such compensation shall not exceed the maximum compensation to be paid under the Agreement. The Consultant agrees this payment shall fully and adequately compensate the Consultant and all subconsultants for all profits, costs, expenses, losses, liabilities, damages, taxes and charges of any kind (whether foreseen or unforeseen) attributable to the termination of this Agreement.

E. Upon termination, the Consultant shall provide the City with the most current design documents, contract documents, writings and other products the Consultant has produced to termination, along with copies of all project-related correspondence and similar items. The City shall have the same rights to use these materials as if termination had not occurred; provided however, that the City shall indemnify and hold the Consultant harmless from any claims, losses, or damages to the extent caused by modifications made by the City to the Consultant's work product.

24. EXPANSION FOR NEW WORK.

This Agreement scope may be expanded for new work. Any expansion for New Work (work not specified within the original Scope of Work Section of this Agreement, and/or not specified in the original RFP as intended work for the Agreement) must comply with all the following limitations and requirements: (a) the New Work is not reasonable to solicit separately; (b) the New Work is for reasonable purpose; (c) the New Work was not reasonably known either the City or Consultant at time of contract or else was mentioned as a possibility in the solicitation (such as future phases of work, or a change in law); (d) the New Work is not significant enough to be reasonably regarded as an independent body of work; (e) the New Work would not have attracted a different field of competition; and (f) the change does not vary the essential identified or main purposes of the Agreement. The City may make exceptions for immaterial changes, emergency or sole source conditions, or other situations required in City opinion. Certain changes are not New Work subject to these limitations, such as additional phases of Work anticipated at the time of solicitation, time extensions, Work Orders issued on an On-Call

contract, and similar. New Work must be mutually agreed and issued by the City through written Addenda. New Work performed before an authorizing Amendment may not be eligible for payment.

25. MISCELLANEOUS PROVISIONS.

A. Amendments: No modification of this Agreement shall be effective unless in writing and signed by an authorized representative of each of the parties hereto.
B. Binding Agreement: This Agreement shall not be binding until signed by both parties. The provisions, covenants and conditions in this Agreement shall bind the parties, their legal heirs, representatives, successors and assigns.
C. Americans with Disabilities Act (ADA): Specific attention by the designer is required in association with the Americans with Disabilities Act (ADA) 42 U.S.C. 12101-12213 and 47 U.S.C. 225 and 611, its requirements, regulations, standards and guidelines, which were updated in 2010 and are effective and mandatory for all State and local government facilities and places of public accommodation for construction projects including alteration of existing facilities, as of March 15, 2012. The City advises that the requirements for accessibility under the ADA, may contain provisions that differ substantively from accessibility provisions in applicable State and City codes, and if the provisions of the ADA impose a greater or equal protection for the rights of individuals with disabilities or individuals associated with them than the adopted local codes, the ADA prevail unless approval for an exception is obtained by a formal documented process. Where local codes provide exceptions from accessibility requirements that differ from the ADA Standards; such exceptions may not be permitted for publicly owned facilities subject to Title II requirements unless the same exception exists in the Title II regulations. It is the responsibility of the designer to determine the code provisions.
D. The Consultant, at no expense to the City, shall comply with all laws of the United States and Washington, the Charter and ordinances of the City of Spokane; and rules, regulations, orders and directives of their administrative agencies and officers. Without limiting the generality of this paragraph, the Consultant shall comply with the requirements of this Section.
E. This Agreement shall be construed and interpreted under the laws of Washington. The venue of any action brought shall be in the Superior Court of Spokane County.
F. Remedies Cumulative: Rights under this Agreement are cumulative and nonexclusive of any other remedy of law or in equity.
G. Captions: The titles of sections or subsections are for convenience only and do not define or limit the contents.
H. Severability: If any term or provision is determined by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Agreement shall not be affected, and each term and provision shall be valid and enforceable to the fullest extent permitted by law.
I. Waiver: No covenant, term or condition or the breach shall be deemed waived, except by written consent of the party against whom the waiver is claimed, and any waiver of the breach of any covenant, term or condition shall not be deemed a waiver of any preceding or succeeding breach of the same or any other covenant, term of condition. Neither the acceptance by the City of any performance by the Consultant after the time the same shall have become due nor payment to the Consultant for any portion of the Work shall constitute a waiver by the City of the breach or default of any covenant, term or condition unless otherwise expressly agreed to by the City in writing.
J. Additional Provisions: This Agreement may be modified by additional terms and conditions (“Special Conditions”) which shall be attached to this Agreement as an Exhibit. The parties agree that the Special Conditions shall supplement the terms and conditions of the Agreement, and in the event of ambiguity or conflict with the terms and conditions of the Agreement, these Special Conditions shall govern.

K. Entire Agreement: This document along with any exhibits and all attachments, and subsequently issued addenda, comprises the entire agreement between the City and the Consultant. If conflict occurs between contract documents and applicable laws, codes, ordinances or regulations, the most stringent or legally binding requirement shall govern and be considered a part of this contract to afford the City the maximum benefits.

L. Negotiated Agreement: The parties acknowledge this is a negotiated agreement, that they have had this Agreement reviewed by their respective legal counsel, and that the terms and conditions of this Agreement are not to be construed against any party on the basis of such party's draftsmanship.

M. No personal liability: No officer, agent or authorized employee of the City shall be personally responsible for any liability arising under this Agreement, whether expressed or implied, nor for any statement or representation made or in any connection with this Agreement.

IN WITNESS WHEREOF, in consideration of the terms, conditions and covenants contained, or attached and incorporated and made a part, the parties have executed this Agreement by having legally-binding representatives affix their signatures below.

DEECO, INC.	**CITY OF SPOKANE**
By_____	By_____
Signature Date	Signature Date
_____	_____
Type or Print Name	Type or Print Name
_____	_____
Title	Title
Attest:	Approved as to form:
_____	_____
City Clerk	Assistant City Attorney

Attachments:
Exhibit A – Certificate Regarding Debarment
Exhibit B – Consultant's Response dated July 25, 2022

22-170

EXHIBIT A

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. The undersigned (i.e., signatory for the Subrecipient / Contractor / Consultant) certifies, to the best of its knowledge and belief, that it and its principals:

   a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
   b. Have not within a three-year period preceding this contract been convicted or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice;
   c. Are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and,
   d. Have not within a three-year period preceding this contract had one or more public transactions (federal, state, or local) terminated for cause or default.

2. The undersigned agrees by signing this contract that it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction.

3. The undersigned further agrees by signing this contract that it will include the following clause, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions:

   Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions

   1. The lower tier contractor certified, by signing this contract that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

   2. Where the lower tier contractor is unable to certify to any of the statements in this contract, such contractor shall attach an explanation to this contract.

4. I understand that a false statement of this certification may be grounds for termination of the contract.

Name of Subrecipient / Contractor / Consultant (Type or Print)	Program Title (Type or Print)
Name of Certifying Official (Type or Print) Title of Certifying Official (Type or Print)	Signature Date (Type or Print)

EXHIBIT B

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	9/28/2022
		Clerk's File #	OPR 2021-0716
		Renews #	
Submitting Dept	SOLID WASTE DISPOSAL	Cross Ref #	
Contact Name/Phone	DAVID PAINE 625-6878	Project #	
Contact E-Mail	DPAINE@SPOKANECITY.ORG	Bid #	PW ITB 5506-21
Agenda Item Type	Contract Item	Requisition #	CR 24017
Agenda Item Name	4490 CONTRACT FOR MECHANICAL REPAIRS AT THE WTE		

Agenda Wording

Contract renewal #1 of 4 with Knight Const. & Supply, Inc. (Deer Park, WA) for mechanical repairs at the WTE from Nov. 1, 2022 through Oct. 31, 2023 with a cost not to exceed $2,200,000.00 including tax.

Summary (Background)

The necessary scheduled and emergency maintenance work at the WTE requires specialized millwright skills. On Sept. 20, 2021, bidding closed on PW ITB 5506-21 for these services and Knight Const. & Supply, Inc. was the only response received and awarded a one-year contract with the possibility of four (4) additional one-year renewals. This will be the first of those renewals and pricing has been increased to reflect current prevailing wage rates.

Lease? NO Grant related? NO Public Works? YES

Fiscal Impact		Budget Account
Expense	$ 2,200,000.00	# 4490-44100-37148-54803-34002
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	AVERYT, CHRIS	Study Session\Other	PIES 9/26
Division Director	FEIST, MARLENE	Council Sponsor	CM Kinnear
Finance	ALBIN-MOORE, ANGELA	Distribution List	
Legal	PICCOLO, MIKE	mdorgan@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	jsalstrom@spokanecity.org	
Additional Approvals		tprince@spokanecity.org	
Purchasing	PRINCE, THEA	rrinderle@spokanecity.org	
		DocuSign: Dave Knight, VP, dave@knightconst.com	

Committee Agenda Sheet
Public Infrastructure, Environment and Sustainability

Submitting Department	Solid Waste Disposal
Contact Name & Phone	David Paine, 625-6878
Contact Email	dpaine@spokanecity.org
Council Sponsor(s)	CM Lori Kinnear
Select Agenda Item Type	■ Consent ☐ Discussion Time Requested: _____
Agenda Item Name	Contract renewal for mechanical repairs at the WTE.
Summary (Background)	The necessary scheduled and emergency maintenance work at the WTE requires specialized millwright skills. Contractors must be qualified to perform grate module inspections, replacements and repairs on Von Roll Type R-10046 grates and a Combustion Engineering Continuous Ash Discharge Spreader Stoker in accordance with manufacturers' specifications. On Sept. 20, 2021, bidding closed on PW ITB #5506-21 for these specialized services. Knight Const. & Supply, Inc., of Deer Park, WA, was the only bid received and was determined to be responsive and responsible. The resulting contract was for one year, from Nov. 1, 2021 through Oct. 31, 2022, with the possibility of four (4) one-year renewals and an annual cost not to exceed $2,200,000.00 including tax. This will be the first of the four (4) possible renewals and will span from Nov. 1, 2022 through Oct. 31, 2023 and have an anticipated cost not to exceed $2,200,000.00 including taxes.
Proposed Council Action & Date:	Consent to proceed on 9/26/22

Fiscal Impact:

Total Cost: $2,200,000.00

Approved in current year budget? ■ Yes ☐ No ☐ N/A

Funding Source ☐ One-time ■ Recurring

Specify funding source: 2022 SWD Budget

Expense Occurrence ☐ One-time ■ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts

What impacts would the proposal have on historically excluded communities?

N/A

How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities?

N/A

How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?

Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others?

This contract extension supports the COS WTE's ability to maintain and operate the facility in the most effective, efficient, and compliant manner. This contract supports efforts outline in the COS WTE Capital Improvement Plan, the Comprehensive Plan and the Sustainable Action Plan.

City Clerk's No. OPR 2021-0716

City of Spokane

CONTRACT RENEWAL
1 of 4

Title: WASTE TO ENERGY MECHANICAL REPAIRS

This Contract Amendment is made and entered into by and between the **CITY OF SPOKANE** as ("City"), a Washington municipal corporation, and **KNIGHT CONST. & SUPPLY, INC.**, whose address is 28308 North Cedar Road, Deer Park, Washington 99006 as ("Contractor"), individually hereafter referenced as a "party", and together as the "parties".

WHEREAS, the parties entered into a Contract wherein the Contractor agreed to do perform Mechanical Repairs at the Waste to Energy Facility; and

WHEREAS, the initial contract provided for four (4) additional one (1) year renewals, with this being the first of those renewals.

NOW, THEREFORE, in consideration of these terms, the parties mutually agree as follows:

1. CONTRACT DOCUMENTS.
The original Contract, dated November 11, 2021, any previous amendments, renewals and / or extensions / thereto, are incorporated by reference into this document as though written in full and shall remain in full force and effect except as provided herein.

2. EFFECTIVE DATE.
This Contract Renewal shall become effective on November 1, 2022 and shall run through October 31, 2023.

3. COMPENSATION.
The City shall pay an additional amount not to exceed **TWO MILLION TWO HUNDRED THOUSAND AND 00/100 DOLLARS** (**$2,200,000.00**), and applicable sales tax, in accordance with Contractor's 2023 Billing Rates dated August 12, 2022, attached hereto, for everything furnished and done under this Contract Renewal. This is the maximum amount to be paid under this Renewal, and shall not be exceeded without the prior written authorization of the City, memorialized with the same formality as the original Contract and this Renewal document.

4. DEBARMENT AND SUSPENSION.
The Contractor has provided its certification that it is in compliance with and shall not contract with individuals or organizations which are debarred, suspended, or otherwise excluded from or

ineligible from participation in Federal Assistance Programs under Executive Order 12549 and "Debarment and Suspension", codified at 29 CFR part 98.

IN WITNESS WHEREOF, in consideration of the terms, conditions and covenants contained, or attached and incorporated and made a part, the parties have executed this Contract Renewal by having legally-binding representatives affix their signatures below.

KNIGHT CONST. & SUPPLY, INC.	**CITY OF SPOKANE**
By_____	By_____
Signature Date	Signature Date
_____	_____
Type or Print Name	Type or Print Name
_____	_____
Title	Title
Attest:	Approved as to form:
_____	_____
City Clerk	Assistant City Attorney

Attachments:
Contractor's 2023 Billing Rates dated August 12, 2022
Certificate Regarding Debarment

22-173

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. The undersigned (i.e., signatory for the Subrecipient / Contractor / Consultant) certifies, to the best of its knowledge and belief, that it and its principals:

   a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
   b. Have not within a three-year period preceding this contract been convicted or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice;
   c. Are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and,
   d. Have not within a three-year period preceding this contract had one or more public transactions (federal, state, or local) terminated for cause or default.

2. The undersigned agrees by signing this contract that it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction.

3. The undersigned further agrees by signing this contract that it will include the following clause, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions:

   Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions

   1. The lower tier contractor certified, by signing this contract that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

   2. Where the lower tier contractor is unable to certify to any of the statements in this contract, such contractor shall attach an explanation to this contract.

4. I understand that a false statement of this certification may be grounds for termination of the contract.

Name of Subrecipient / Contractor / Consultant (Type or Print)	Program Title (Type or Print)
Name of Certifying Official (Type or Print) Title of Certifying Official (Type or Print)	Signature Date (Type or Print)

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BUILDING SUPPLIES
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Fax (509) 276-6055
28308 N. CEDAR RD.
DEER PARK, WA 99006

August 12, 2022

Rick Rinderle, C.P.M.
City of Spokane
808 W Spokane Falls Blvd
Spokane WA 99201

Re: **WTEF Mechanical Repairs,** Contract Extension 1 of 4 with Cost Rate Adjustment

Mr. Rinderle,

Knight Const. & Supply (KCS) is pleased to provide the 2023 Billing Rates for the WTEF Mechanical Repair Contract Extension, effective November 1, 2022. The attached table below contains the 2023 Billing Rates, which have been updated to include the current prevailing wage rates as required by RCW 35.22.620 and Section 5 and Section 6 of the above referenced contract extension.

Please advise if any additional information is required for compliance with Section 5 and 6 of the contract extension. Feel free to contact KCS Project Manager Jesse Ingraham to discuss this pricing in more detail.

Respectfully,

Jesse Ingraham
Project Manager
Knight Const. & Supply, Inc.

ORP 2021-0716	Base Year Valid from 11/1/2021 through 10/31/2022			1st Opt year Valid from 11/1/2022 through 10/31/2023		
Description	Unit Type	Est Qty	Bid Unit Price	Unit Type	Est Qty	Bid Unit Price
Set up/mobilization cost (outage only)	each: **$7,800**	2	$15,600.00	each: $7,800	2	$15,600.00
Demobilization cost (outage only)	each: **$6,000**	2	$1,200.00	each: $6,000	2	$12,000.00
Millwright-Journeyman **(Straight Time Rate)**	Hour	1-100+	$117.00	Hour	1-100+	$123.00
Millwright-Journeyman (**1.5-time rate**)	Hour	1-100+	$171.00	Hour	1-100+	$179.00
Millwright-Journeyman (**2-time rate**)	Hour	1-100+	$227.00	Hour	1-100+	$237.00
Millwright-Foreman **(Straight Time Rate)**	Hour	1-100+	$117.00	Hour	1-100+	$123.00
Millwright-Foreman **(1.5-time rate)**	Hour	1-100	$171.00	Hour	1-100	$179.00
Millwright-Foreman (**2-time rate**)	Hour	1-100	$227.00	Hour	1-100	$237.00
Heavy Equipment Operator **(Straight Time Rate)**	Hour	1-100	$85.01	Hour	1-100	$88.00
Heavy Equipment Operator (**1.5-time rate**)	Hour	1-100	$125.01	Hour	1-100	$128.00
Heavy Equipment Operator (**2-time rate**)	Hour	1-100	$164.01	Hour	1-100	$168.00
Heavy Equipment Operator- Foreman **(Straight Time Rate)**	Hour	1-100	$85.01	Hour	1-100	$88.00
Heavy Equipment Operator- Foreman (**1.5-time rate**)	Hour	1-100	$125.01	Hour	1-100	$128.00
Heavy Equipment Operator – Foreman (**2-time rate**)	Hour	1-100	$164.01	Hour	1-100	$168.00
Crane Operator-Journeyman **(Straight Time Rate)**	Hour	1-100	$85.01	Hour	1-100	$88.00
Crane Operator-Journeyman (**1.5-time rate**)	Hour	1-100	$125.01	Hour	1-100	$128.00
Crane Operator-Journeyman (**2-time rate**)	Hour	1-100	$164.01	Hour	1-100	$168.00
Laborer-Journeyman (**Straight Time Rate**)	Hour	1-100	$74.75	Hour	1-100	$81.00
Laborer-Journeyman (**1.5-time rate**)	Hour	1-100	$109.75	Hour	1-100	$118.00
Laborer-Journeyman (**2-time rate**)	Hour	1-100	$143.75	Hour	1-100	$155.00
Management Supervisor (**Straight Time Rate**)	Hour	1-100	$117.00	Hour	1-100	$123.00
Management Supervisor (**1.5 time rate**)	Hour	1-100	$171.00	Hour	1-100	$179.00
Management Supervisor (**2-time rate**)	Hour	1-100	$227.00	Hour	1-100	$237.00
Shop Labor-Fabricator/Machinist (**Straight Time Rate)**	Hour	1-100	$70.00	Hour	1-100	$73.00

Shop Labor-Fabricator/Machinist **(1.5 time rate)**	Hour	1-100	$70.00	Hour	1-100	$104.50
Crane Operator-Journeyman (**Straight Time Rate**)	Hour	1-100	$85.01	Hour	1-100	$88.00
Crane Operator-Journeyman (**1.5-time rate**)	Hour	1-100	$125.01	Hour	1-100	$128.00
Crane Operator-Journeyman (**2-time rate**)	Hour	1-100	$164.01	Hour	1-100	$168.00
Scissors Lift-at least 26-foot working height	Day Week	1-100	$56.00 $126.00	Day Week	1-100	$56.00 $126.00
Pick-up Truck-1/2 ton	Day Week	1-100	$72.00 $277.00	Day Week	1-100	$72.00 $277.00
Pick-up Truck-3/4 ton	Day Week	1-100	$72.00 $277.00	Day Week	1-100	$72.00 $277.00
Forklift-5,000 Lb.	Day Week	1-100	$171.00 $512.00	Day Week	1-100	$171.00 $512.00
Welder-250 Amp	Day Week	1-100	$66.00 $252.00	Day Week	1-100	$66.00 $252.00
Welder-300 XMT Amp	Day Week	1-100	$66.00 $252.00	Day Week	1-100	$66.00 $252.00
Cargo Tool Trailer/ Office	Day Week	1-100	$80.00 $320.00	Day Week	1-100	$80.00 $320.00
Manlift 40'w/Knuckle boom	Day Week	1-100	$132.00 $315.00	Day Week	1-100	$132.00 $315.00
Manlift 80'	Day Week	1-100	$776.00 $2,300.00	Day Week	1-100	$776.00 $2,300.00
Scissor lift	Day Week	1-100	$56.00 $126.00	Day Week	1-100	$56.00 $126.00
Carry deck crane	Day Week	1-100	$179.00 $680.00	Day Week	1-100	$179.00 $680.00
20-ton crane	Day Week	1-100	$600.00 $2,400.00	Day Week	1-100	$600.00 $2,400.00
80-ton crane	Day Week	1-100	$1,323.00 $5,040.00	Day Week	1-100	$1,323.00 $5,040.00
All terrain forklift	Day Week	1-100	$231.00 $624.00	Day Week	1-100	$231.00 $624.00
% Markup for Sub contractors/ Parts /materials			15%			15%

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	9/28/2022
		Clerk's File #	OPR 2022-0710
		Renews #	
Submitting Dept	SOLID WASTE DISPOSAL	Cross Ref #	ORD C36291
Contact Name/Phone	DAVID PAINE 625-6878	Project #	
Contact E-Mail	DPAINE@SPOKANECITY.ORG	Bid #	EMERGENCY
Agenda Item Type	Contract Item	Requisition #	SBO
Agenda Item Name	4490 EMERGENCY TIPPING FLOOR REPAIRS AT THE WTE		

Agenda Wording

Contract with Knight Const. & Supply, Inc. (Deer Park, WA) for emergency repair of the tipping floor at the WTE with a cost not to exceed $827,310.00 plus tax.

Summary (Background)

On August 24, 2022, substantial damage to the structural components of the tipping floor in bay 6 were discovered. Due to safety reasons and an inability to perform essential functions, a timely repair was needed. On Aug 26, an emergency justification was approved to bypass the competitive procedures called out in the Purchasing Policy. Knight Const. & Supply Inc. is currently completing the work as they had the available resources and knowledge of the facility to complete these repairs quickly.

Lease? NO Grant related? NO Public Works? YES

Fiscal Impact		Budget Account
Expense	$ 827,310.00	# 4490-44100-37148-54802-34002
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	AVERYT, CHRIS	Study Session\Other	PIES 9/26
Division Director	FEIST, MARLENE	Council Sponsor	CM Kinnear
Finance	ALBIN-MOORE, ANGELA	Distribution List	
Legal	HARRINGTON, MARGARET	mdorgan@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	jsalstrom@spokanecity.org	
Additional Approvals		tprince@spokanecity.org	
Purchasing	PRINCE, THEA	rrinderle@spokanecity.org	
		DocuSign: Dave Knight, VP, dave@knightconst.com	

Committee Agenda Sheet
Public Infrastructure, Environment and Sustainability

Submitting Department	Solid Waste Disposal
Contact Name & Phone	David Paine, 625-6878
Contact Email	dpaine@spokanecity.org
Council Sponsor(s)	CM Lori Kinnear
Select Agenda Item Type	■ Consent ☐ Discussion Time Requested: _____
Agenda Item Name	Emergency tipping floor repairs at the WTE
Summary (Background)	On August 24, 2022, we discovered substantial damage to the structural components of the tipping floor in bay 6, resulting in a visible failure, rendering the bay inaccessible. This section of floor is also the roof of our warehouse. The damage to the floor is visible in the warehouse with an 8" depression in the ceiling and has rendered bay 6 and the warehouse inaccessible. Bay 6, frequently accessed by refuse cranes, large wheel loaders, staff on foot and customers, is no longer safe and poses potential for further catastrophic damage to the structure, equipment, and loss of life. This creates a life safety issue with imminent failure and needs to be addressed immediately. The inability to use bay 6 has a direct impact on the safety of our citizens, staff, contractors, and our ability to support the publics special handling needs. The WTE Team with WTE's Mechanical Engineer, Foster Newberg as the lead, worked with a local contractor to develop an expedited repair plan, duration for the repair, and cost estimates. The Engineering estimate is $660,000.00. We are asking for $660,000.00 plus a 15% contingency and taxes ($827,310.00 total). The anticipated project duration is 6-8 weeks working round the clock but not on weekends.
Proposed Council Action & Date:	Consent on 9/26/22.

Fiscal Impact:
Total Cost: $827,310.00
Approved in current year budget? ☐ Yes ■ No ☐ N/A

Funding Source ■ One-time ☐ Recurring
Specify funding source: Solid Waste Fund Reserves

Expense Occurrence ■ One-time ☐ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts

What impacts would the proposal have on historically excluded communities?

N/A

How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities?

N/A

How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?

N/A

Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others?

As an emergency repair this expenditure is outside the Capital Improvement Plan but does support the efforts of the Comprehensive and Sustainable Action Plan, providing a continued outlet to our citizens and the community for disposal of MSW. This repair will allow the COS WTE to continue to provide assured destruction of materials as requested by numerous local, state, and federal agencies.

City Clerk's No. 2022-0710

City of Spokane

PUBLIC WORKS CONTRACT

Title: **EMERGENCY TIPPING FLOOR REPAIRS**

This Contract is made and entered into by and between the **CITY OF SPOKANE** as ("City"), a Washington municipal corporation, and **KNIGHT CONST. & SUPPLY, INC.**, whose address is 2601 East 6th Street, Deer Park, Washington 99006 as ("Contractor"), individually hereafter referenced as a "party", and together as the "parties".

The parties agree as follows:

1. PERFORMANCE/SCOPE OF WORK. The Contractor will do all work, furnish all labor, materials, tools, construction equipment, transportation, supplies, supervision, organization and other items of work and costs necessary for the proper execution and completion of the work described in the specifications for **Emergency Tipping Floor Repairs in Bay 6 at the Waste to Energy Facility**, in accordance with the Emergency Justification Form attached as Exhibit B.
2.
3. CONTRACT DOCUMENTS. The Contract Documents are this Contract, the Contractor's completed bid proposal form, the contract provisions, contract plans, standard specifications, standard plans, addenda, various certifications and affidavits, supplemental agreements, change orders and subsurface boring logs (if any). These contract documents are on file in the Solid Waste Department and are incorporated into this Contract by reference as if they were set forth at length. In the event of a conflict, or to resolve an ambiguity or dispute, federal and state requirements supersede this Contract, and this Contract supersedes the other contract documents.

3. TERM. The term of this Contract begins on August 26, 2022, and ends on December 31, 2022, unless amended by written agreement or terminated earlier under the provisions.

4. TERMINATION. Either party may terminate this Contract by ten (10) days written notice to the other party. In the event of such termination, the City shall pay the Contractor for all work previously authorized and performed prior to the termination date.

5. COMPENSATION/PAYMENT.

A. COMPENSATION. Total compensation for Contractor's services under this Contract shall be a maximum amount not to exceed **SEVEN HUNDRED FIFTY-NINE THOUSAND AND NO/100 DOLLARS ($759,000.00)**, excluding sales tax, unless modified by a written amendment to this Contract. This is the maximum amount to be paid under this Contract for the work described in Section 1 above,

and shall not be exceeded without the prior written authorization of the City in the form of an executed amendment to this Contract.

B. PAYMENT. The Contractor will send its applications for payment to the Spokane Solid Waste Disposal, Administration Office, 2900 South Geiger Blvd., Spokane, Washington 99224. All invoices should include the Department Contract No. "OPR 2022-0710" and an approved L & I Intent to Pay Prevailing Wage number. The final invoice should include an approved Affidavit of Wages Paid number. Payment will not be made without this documentation included on the invoice. **Payment will be made via direct deposit/ACH** within thirty (30) days after receipt of the Company's application except as provided by state law. Five percent (5%) of the Contract price may be retained by the City, in accord with RCW 60.28 for a minimum of forty five (45) days after final acceptance, as a trust fund for the protection and payment of: the claims of any person arising under the Contract; and the State with respect to taxes imposed pursuant to Titles 50, 51 and 82 RCW which may be due from the Contractor. Contractor may provide a Retainage Bond in lieu of having Retainage held.

6. WAGES. The Contractor and all subcontractors will submit a "Statement of Intent to Pay Prevailing Wages" certified by the industrial statistician of the Department of Labor and Industries, prior to any payments. The "Statement of Intent to Pay Prevailing Wages" shall include: (1) the Contractor's registration number; and (2) the prevailing wages under RCW 39.12.020 and the number of workers in each classification. Each voucher claim submitted by the Contractor for payment on a project estimate shall state that the prevailing wages have been paid in accordance with the "Statement(s) of Intent to Pay Prevailing Wages" on file with the City. Prior to the payment of funds held under RCW 60.28, the Contractor and subcontractors must submit an "Affidavit of Wages Paid" certified by the industrial statistician.

7. STATEMENT OF INTENT TO PAY PREVAILING WAGES TO BE POSTED. The Contractor and each subcontractor required to pay the prevailing rate of wages shall post in a location readily visible at the job site: (1) a copy of a "Statement of Intent to Pay Prevailing Wages" approved by the industrial statistician of the State Department of Labor and Industries; and (2) the address and telephone number of the industrial statistician of the Department of Labor and Industries where a complaint or inquiry concerning prevailing wages may be made.

8. BONDS. The Contractor may not commence work until it obtains all insurance, permits and bonds required by the contract documents and applicable law. This includes the execution of a performance bond and a payment bond on the forms attached, each equal to one hundred percent (100%) of the contract price, and written by a corporate surety company licensed to do business in Washington State.

9. PUBLIC WORKS REQUIREMENTS. The Contractor and each subcontractor are required to fulfill the Department of Labor and Industries Public Works and Prevailing Wage Training Requirement under RCW 39.04.350. The contractor must verify responsibility criteria for each first tier subcontractor, and a subcontractor of any tier that hires other subcontractors must verify the responsibility criteria listed in RCW 39.04.350(1) for each of its subcontractors. Verification shall include that each subcontractor, at the time of subcontract execution, meets the responsibility criteria. This verification requirement, as well as responsibility criteria, must be included in every public works contract and subcontract of every tier.

10. INSURANCE. During the period of the Contract, the Contractor shall maintain in force at its own expense, each insurance noted below with companies or through sources approved by the State Insurance Commissioner pursuant to RCW 48:

A. Worker's Compensation Insurance in compliance with RCW 51.12.020, which requires subject employers to provide workers' compensation coverage for all their subject workers and Employer's Liability Insurance in the amount of $1,000,000;

B. General Liability Insurance on an occurrence basis, with a combined single limit of not less than $1,000,000 each occurrence for bodily injury and property damage. It shall include contractual liability coverage for the indemnity provided under this Contract. It shall provide that the City, its officers and employees are additional insureds but only with respect to the Contractor's services to be provided under this Contract;

i. Acceptable supplementary Umbrella insurance coverage combined with Company's General Liability insurance policy must be a minimum of $1,000,000, in order to meet the insurance coverage limits required in this Contract; and

C. Automobile Liability Insurance with a combined single limit, or the equivalent of not less than $1,000,000 each accident for bodily injury and property damage, including coverage for owned, hired and non-owned vehicles; and

D. Property Insurance if materials and supplies are furnished by the Contractor. The amount of the insurance coverage shall be the value of the materials and supplies of the completed value of improvement. Hazard or XCU (explosion, collapse, underground) insurance should be provided if any hazard exists.

There shall be no cancellation, material change, reduction of limits or intent not to renew the insurance coverage(s) without thirty (30) days written notice from the Consultant or its insurer(s) to the City. As evidence of the insurance coverage(s) required by this Agreement, the Consultant shall furnish acceptable Certificates of Insurance (COI) to the City at the time it returns this signed Agreement. **The certificate shall specify the City of Spokane as "Additional Insured"** specifically for Contractor's services under this Agreement, as well as all of the parties who are additional insureds, and include applicable policy endorsements, the thirty (30) day cancellation clause, and the deduction or retention level. The Consultant shall be financially responsible for all pertinent deductibles, self-insured retentions, and/or self-insurance.

11. INDEMNIFICATION. The Contractor shall defend, indemnify, and hold the City and its officers and employees harmless from all claims, demands, or suits at law or equity asserted by third parties for bodily injury (including death) and/or property damage which arise from the Contractor's negligence or willful misconduct under this Agreement, including attorneys' fees and litigation costs; provided that nothing herein shall require a Contractor to indemnify the City against and hold harmless the City from claims, demands or suits based solely upon the negligence of the City, its agents, officers, and employees. If a claim or suit is caused by or results from the concurrent negligence of the Contractor's agents or employees and the City, its agents, officers and employees, this indemnity provision shall be valid and enforceable to the extent of the negligence of the Contractor, its agents or employees. The Contractor specifically assumes liability and agrees to defend, indemnify, and hold the City harmless for actions brought by the Contractor's own employees against the City and, solely for the purpose of this indemnification

and defense, the Contractor specifically waives any immunity under the Washington State industrial insurance law, or Title 51 RCW. The Contractor recognizes that this waiver was specifically entered into pursuant to the provisions of RCW 4.24.115 and was the subject of mutual negotiation. The indemnity and agreement to defend and hold the City harmless provided for in this section shall survive any termination or expiration of this agreement.

12. CONTRACTOR'S WARRANTY. The Contractor's warranty for all work, labor and materials shall be in accordance with the contract documents.

13. SUBCONTRACTOR RESPONSIBILITY.

A. The Contractor shall include the language of this section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the City, the Contractor shall promptly provide documentation to the City demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this section apply to all subcontractors regardless of tier.

B. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:

1. Have a current certificate of registration in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;

2. Have a current Washington Unified Business Identifier (UBI) number;

3. If applicable, have:

    a. Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;
    b. A Washington Employment Security Department number, as required in Title 50 RCW;
    c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
    d. An electrical contractor license, if required by Chapter 19.28 RCW;
    e. An elevator contractor license, if required by Chapter 70.87 RCW.

4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3).

C. On Public Works construction projects, as defined in RCW 39.04.010, with an estimated cost of six hundred thousand dollars ($600,000) or more, at least fifteen (15) percent of the labor hours on each project shall be performed by apprentices enrolled in a State-approved apprenticeship program; and for each contract in the project fifteen (15) percent of the labor hours for each craft that has an available state-approved apprenticeship program for Spokane County and utilizes more than one hundred sixty (160) hours in each contract; shall be performed by apprentices enrolled in a state-approved apprenticeship program.

1. Subcontracting Requirements. The utilization percentages for apprenticeship labor for Public Works construction contracts shall also apply to all subcontracts of one hundred thousand dollars ($100,000) or more within those contracts, and at least fifteen percent (15%) of the labor hours for each such subcontract shall be performed by apprentices in a state-approved apprenticeship program. For each craft that has an available apprenticeship program for Spokane County and performs more than one hundred sixty (160) hours on each project, fifteen (15) percent of the labor hours shall be performed by apprentices enrolled in a State-approved apprenticeship program

2. Each subcontractor which this chapter applies to is required to execute a form, provided by the city, acknowledging that the requirements of Article X 07.06 SMC are applicable to the labor hours for the project.

14. NONDISCRIMINATION. No individual shall be excluded from participation in, denied the benefit of, subjected to discrimination under, or denied employment in the administration of or in connection with this Contract because of age, sex, race, color, religion, creed, marital status, familial status, sexual orientation including gender expression or gender identity, national origin, honorably discharged veteran or military status, the presence of any sensory, mental or physical disability, or use of a service animal by a person with disabilities. The Contractor agrees to comply with, and to require that all subcontractors comply with, Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act, as applicable to the Contractor.

15. EXECUTIVE ORDER 11246.

A. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Contractor will take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include but not be limited to the following: employment upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

B. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

C. The Contractor will send each labor union, or representative of workers with which it has a collective bargaining contract or other contract or understanding, a notice, to be provided by the agency contracting officer, advising the labor union or workers' representative of the Contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

D. The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

E. The Contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to

ascertain compliance with such rules, regulations and orders.

F. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of such rules, regulations or orders, this Contract may be canceled, terminated or suspended in whole or in part, and the Contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

G. The Contractor will include the provisions of paragraphs A through G in every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: PROVIDED, HOWEVER, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as the result of such direction, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

16. DEBARMENT AND SUSPENSION. The Contractor has provided its certification that it is in compliance with and shall not contract with individuals or organizations which are debarred, suspended, or otherwise excluded from or ineligible from participation in Federal Assistance Programs under Executive Order 12549 and “Debarment and Suspension”, codified at 29 CFR part 98.

17. LIQUIDATED DAMAGES. Liquidated damages shall be in accordance with the contract documents.

18. ASSIGNMENTS. The Contractor may not assign, transfer or sublet any part of the work under this Contract, or assign any monies due, without the written approval of the City, except as may be required by law. In the event of assignment of accounts or monies due under this Contract, the Contractor specifically agrees to give immediate written notice to the City Administrator, no later than five (5) business days after the assignment.

19. ANTI-KICKBACK. No officer or employee of the City of Spokane, having the power or duty to perform an official act or action related to this Contract shall have or acquire any interest in the Contract, or have solicited, accepted or granted a present or future gift, favor, service or other thing of value from or to any person involved in the Contract.

20. COMPLIANCE WITH LAWS. Each party shall comply with all applicable federal, state, and local laws and regulations that are incorporated herein by reference.

21. DISPUTES. This Contract shall be performed under the laws of the State of Washington. Any litigation to enforce this Contract or any of its provisions shall be brought in Spokane County, Washington.

22. SEVERABILITY. In the event any provision of this Contract should become invalid, the rest of the Contract shall remain in full force and effect.

23. AUDIT / RECORDS. The Contractor and its subcontractors shall maintain for a minimum of three (3) years following final payment all records related to its performance of the Contract. The Contractor and its subcontractors shall provide access to authorized City representatives, at reasonable times and in a reasonable manner to inspect and copy any such record. In the event of conflict between this provision and related auditing provisions required under federal law applicable to the Contract, the federal law shall prevail.

24. BUSINESS REGISTRATION REQUIREMENT. Section 8.01.070 of the Spokane Municipal Code states that no person may engage in business with the City without first having obtained a valid annual business registration. The Contractor shall be responsible for contacting the State of Washington Business License Services at www.dor.wa.gov or 360-705-6741 to obtain a business registration. If the Contractor does not believe it is required to obtain a business registration, it may contact the City's Taxes and Licenses Division at (509) 625-6070 to request an exemption status determination.

25. CONSTRUAL. The Contractor acknowledges receipt of a copy of the contract documents and agrees to comply with them. The silence or omission in the contract documents concerning any detail required for the proper execution and completion of the work means that only the best general practice is to prevail and that only material and workmanship of the best quality are to be used. This Contract shall be construed neither in favor of nor against either party.

26. MODIFICATIONS. The City may modify this Contract and order changes in the work whenever necessary or advisable. The Contractor will accept modifications when ordered in writing by the Director of Engineering Services, and the Contract time and compensation will be adjusted accordingly.

27. INTEGRATION. This Contract, including any and all exhibits and schedules referred to herein or therein set forth the entire Agreement and understanding between the parties pertaining to the subject matter and merges all prior agreements, negotiations and discussions between them on the same subject matter.

28. FORCE MAJEURE. Neither party shall be liable to the other for any failure or delay in performing its obligations hereunder, or for any loss or damage resulting therefrom, due to: (1) acts of God or public enemy, acts of government, riots, terrorism, fires, floods, strikes, lock outs, epidemics, act or failure to act by the other party, or unusually severe weather affecting City, Contractor or its subcontractors, or (2) causes beyond their reasonable control and which are not foreseeable (each a "Force Majeure Event"). In the event of any such Force Majeure Event, the date of delivery or performance shall be extended for a period equal to the time lost by reason of the delay.

29. KEY PERSONS. The Contractor shall not transfer or reassign any individual designated in this Contract as essential to the Work, nor shall those key persons, or employees of Contractor identified as to be involved in the Project Work be replaced, removed or withdrawn from the Work without the express written consent of the City, which shall not be unreasonably withheld. If any such individual leaves the Contractor's employment, the Contractor shall present to the City one or more individuals with greater or equal qualifications as a replacement, subject to the City's approval, which shall not be unreasonably withheld. The City's approval does not release the Contractor from its obligations under this Contract.

KNIGHT CONST. & SUPPLY, INC.

By_____
Signature Date

_____
Type or Print Name

_____
Title

Attest:

_____
City Clerk

CITY OF SPOKANE

By_____
Signature Date

_____
Type or Print Name

_____
Title

Approved as to form:

_____
Assistant City Attorney

Attachments that are part of this Contract:
Exhibit A - Certification Regarding Debarment
Exhibit B – Emergency Justification Form
Payment Bond
Performance Bond
22-169

EXHIBIT A

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. The undersigned (i.e., signatory for the Subrecipient / Contractor / Consultant) certifies, to the best of its knowledge and belief, that it and its principals:

   a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
   b. Have not within a three-year period preceding this contract been convicted or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice;
   c. Are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and,
   d. Have not within a three-year period preceding this contract had one or more public transactions (federal, state, or local) terminated for cause or default.

2. The undersigned agrees by signing this contract that it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction.

3. The undersigned further agrees by signing this contract that it will include the following clause, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions:

   Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions

   1. The lower tier contractor certified, by signing this contract that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

   2. Where the lower tier contractor is unable to certify to any of the statements in this contract, such contractor shall attach an explanation to this contract.

4. I understand that a false statement of this certification may be grounds for termination of the contract.

Name of Subrecipient / Contractor / Consultant (Type or Print)	Program Title (Type or Print)
Name of Certifying Official (Type or Print) Title of Certifying Official (Type or Print)	Signature Date (Type or Print)

EXHIBIT B

PAYMENT BOND

We, **KNIGHT CONST. & SUPPLY, INC.**, as principal, and _____, as surety, are held and firmly bound to the City of Spokane, Washington, in the sum of **SEVEN HUNDRED FIFTY-NINE THOUSAND AND NO/100 DOLLARS ($759,000.00)**, excluding sales tax, for the payment of which, we bind ourselves and our legal representatives and successors, jointly and severally by this document.

The principal has entered into a contract with the City of Spokane, Washington, to do all work and furnish all materials for the **Emergency Tipping Floor Repairs in Bay 6 at the Waste to Energy Facility.** If the principal shall:

A. pay all laborers, mechanics, subcontractors, material suppliers and all person(s) who shall supply such person or subcontractors; and pay all taxes and contributions, increases and penalties as authorized by law; and

B. comply with all applicable federal, state and local laws and regulations;

then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this bond, except as provided herein, and waives notice of any change, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increased obligation. Any judgment obtained against the City, which relates to or is covered by the contract or this bond, shall be conclusive against the principal and the surety, as to the amount of damages, and their liability, if reasonable notice of the suit has been given.

SIGNED AND SEALED on _____.

KNIGHT CONST. & SUPPLY, INC.,

AS PRINCIPAL

By: _____
Title: _____

_____,
AS SURETY

A valid POWER OF ATTORNEY
for the Surety's agent must
accompany this bond.

By: _____
Its Attorney in Fact

STATE OF WASHINGTON)
) ss.
County of _____)

I certify that I know or have satisfactory evidence that_____ _____signed this document; on oath stated that he/she was authorized to sign the document and acknowledged it as the agent or representative of the named surety company which is authorized to do business in the State of Washington, for the uses and purposes therein mentioned.

DATED: _____ _____
Signature of Notary Public

My appointment expires _____

Approved as to form:

_____
Assistant City Attorney

PERFORMANCE BOND

We, **KNIGHT CONST. & SUPPLY, INC.**, as principal, and _____, as Surety, are held and firmly bound to the City of Spokane, Washington, in the sum of **SEVEN HUNDRED FIFTY-NINE THOUSAND AND NO/100 DOLLARS ($759,000.00)**, excluding sales tax, for the payment of which, we bind ourselves and our legal representatives and successors, jointly and severally by this document.

The principal has entered into a Contract with the City of Spokane, Washington, to do all the work and furnish all materials for the **Emergency Tipping Floor Repairs in Bay 6 at the Waste to Energy Facility**. If the principal shall:

A. promptly and faithfully perform the Contract, and any contractual guaranty and indemnify and hold harmless the City from all loss, damage or claim which may result from any act or omission of the principal, its agents, employees, or subcontractors; and

B. comply with all applicable federal, state and local laws and regulations;

then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this bond, except as provided herein, and waives notice of any change, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increased obligation. Any judgment obtained against the City, which relates to or is covered by the Contract or this bond, shall be conclusive against the principal and the Surety, not only as to the amount of damages, but also as to their liability, if reasonable notice of the suit has been given.

SIGNED AND SEALED on _____

KNIGHT CONST. & SUPPLY, INC.,

AS PRINCIPAL

By: _____
Title: _____

_____,
AS SURETY

A valid POWER OF ATTORNEY
for the Surety's agent must
accompany this bond.

By: _____
Its Attorney in Fact

STATE OF WASHINGTON)
) ss.
County of _____)

I certify that I know or have satisfactory evidence that _____ _____ signed this document; on oath stated that he/she was authorized to sign the document and acknowledged it as the agent or representative of the named Surety Company which is authorized to do business in the State of Washington, for the uses and purposes mentioned in this document.

DATED on _____.

_____
Signature of Notary

My appointment expires _____

Approved as to form:

_____
Assistant City Attorney

City of Spokane
Emergency Justification

Pursuant to the City of Spokane Municipal Code Section 07.06.180 an "Emergency" means unforeseen circumstances beyond the control of the City that either (indicate that at least one of the following conditions applies to your purchase by initialing in the appropriate space):

a) X Present a real immediate threat to the proper performance of essential functions; or

b) X will likely result in material loss or damage to property, bodily injury, or loss of life if immediate action is not taken.

The following items have been purchased as emergencies as indicated above: (Attach another sheet of paper if needed)

Description	Qty	Unit	Unit Price	Total Cost

Description of Emergency/Circumstances Requiring Emergency Purchase :

In the last four (4) days we have discovered substantial damage to the structural components of our tipping floor in bay 6 that has resulted in a visible failure rendering the bay inaccessible. This bay 6 floor is also the roof of our warehouse. The damage to the floor is visible in the warehouse with an 8" depression in the ceiling and has rendered bay 6 and the warehouse inaccessible. Bay 6, frequently accessed by refuse cranes, large wheel loaders, staff on foot and customers, is no longer safe and poses potential for further catastrophic damage to the structure, equipment and loss of life. This creates a life safety issue with imminent failure and needs to be addressed immediately. The inability to use bay 6 has a direct impact on the safety of our citizens, staff, contractors and our ability to support the publics special handling needs. The cost is estimated to be in the $500,000+ range and time is of the essence.

8/26/2022 — Date

Tonya Wallace — Digitally signed by Tonya Wallace Date: 2022.08.26 09:22:15 -07'00'

Signature of Department Buyer

08/25/2022 — Date

David W. Paine — Digitally signed by David W. Paine Date: 2022.08.25 14:48:10 -07'00'

Signature of Department Head/Supervisor

**This form should be filled out for all Emergency Purchases wherein the Department cannot follow the competitive procedures called out in the Purchasing Policy. For purchases between $1,000.00 and $50,000.00 this form should be attached to the other documentation for the purchase and kept in the department wherein the purchase is made. For purchases between $50,000.00 and the bid limit this form should be sent to Purchasing wherein the purchase will be made.

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	9/28/2022
		Clerk's File #	OPR 2021-0527
		Renews #	
Submitting Dept	ENGINEERING SERVICES	Cross Ref #	
Contact Name/Phone	DAN BULLER 509-625-6391	Project #	2021090
Contact E-Mail	DBULLER@SPOKANECITY.ORG	Bid #	
Agenda Item Type	Contract Item	Requisition #	MASTER
Agenda Item Name	0370 - PARAMETRIX CONTRACT AMENDMENT - CIVIL ENGINEERING ON-CALL SERVICES		

Agenda Wording

Amendment to Consultant Agreement with Parametrix, Inc., (Spokane, WA) for On-Call Civil Engineering Services for 2021-2023 non-federal projects. Amendment for additional $600,000.00 (total $1,200,000.00) (Various Neighborhood Councils)

Summary (Background)

This amendment will add $600,000 to the On-call Civil Engineering master contract, original contract began August 16, 2021 for a period of two years with an option to extend for one year. Task Assignments shall be prepared under this Agreement and scoped for individual project needs. Funding shall be from the individual projects.

Lease? NO Grant related? NO Public Works? NO

Fiscal Impact		Budget Account
Expense	$ 600,000	# VARIOUS
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	BULLER, DAN	Study Session\Other	PIES 9/26/22
Division Director	FEIST, MARLENE	Council Sponsor	KINNEAR
Finance	ORLOB, KIMBERLY	Distribution List	
Legal	HARRINGTON, MARGARET	eraea@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	publicworksaccounting@spokanecity.org	
Additional Approvals		dbuller@spokanecity.org	
Purchasing		Roger Flint - khanley@parametrix.com (signee)	
		ddaniels@spokanecity.org	

Committee Agenda Sheet
PIES

Submitting Department	Public Works, Engineering
Contact Name & Phone	Dan Buller 625-6391
Contact Email	dbuller@spokanecity.org
Council Sponsor(s)	Lori Kinnear
Select Agenda Item Type	X Consent ☐ Discussion Time Requested: _____
Agenda Item Name	Civil engineering on-call contract amount increase
Summary (Background)	• The city has various on-call contracts for specialized engineering consultants, including a civil engineering contract for general design assistance. • The on-call contract with Parametrix is for two years ending 7-31-23, with an option to extend to a third year. • The funds available within the original contract amount of $600,000 will be depleted this fall since more work has been directed to Parametrix than originally anticipated. • Funds expended under this contract are reimbursed by various City public works projects.
Proposed Council Action & Date:	Engineering Services requests adding $600,000 to this contract.

Fiscal Impact:
Total Cost:
Approved in current year budget? ☐ Yes X No ☐ N/A

Funding Source X One-time ☐ Recurring
Specify funding source: project funds (generally street or utility funds)

Expense Occurrence X One-time ☐ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts

What impacts would the proposal have on historically excluded communities?

Public Works services and projects are designed to serve all citizens and businesses. We strive to offer a consistent level of service to all, to distribute public investment throughout the community, and to respond to gaps in services identified in various City plans. We recognize the need to maintain affordability and predictability for utility customers. And we are committed to delivering work that is both financially and environmentally responsible. This item supports the operations of Public Works.

How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities?

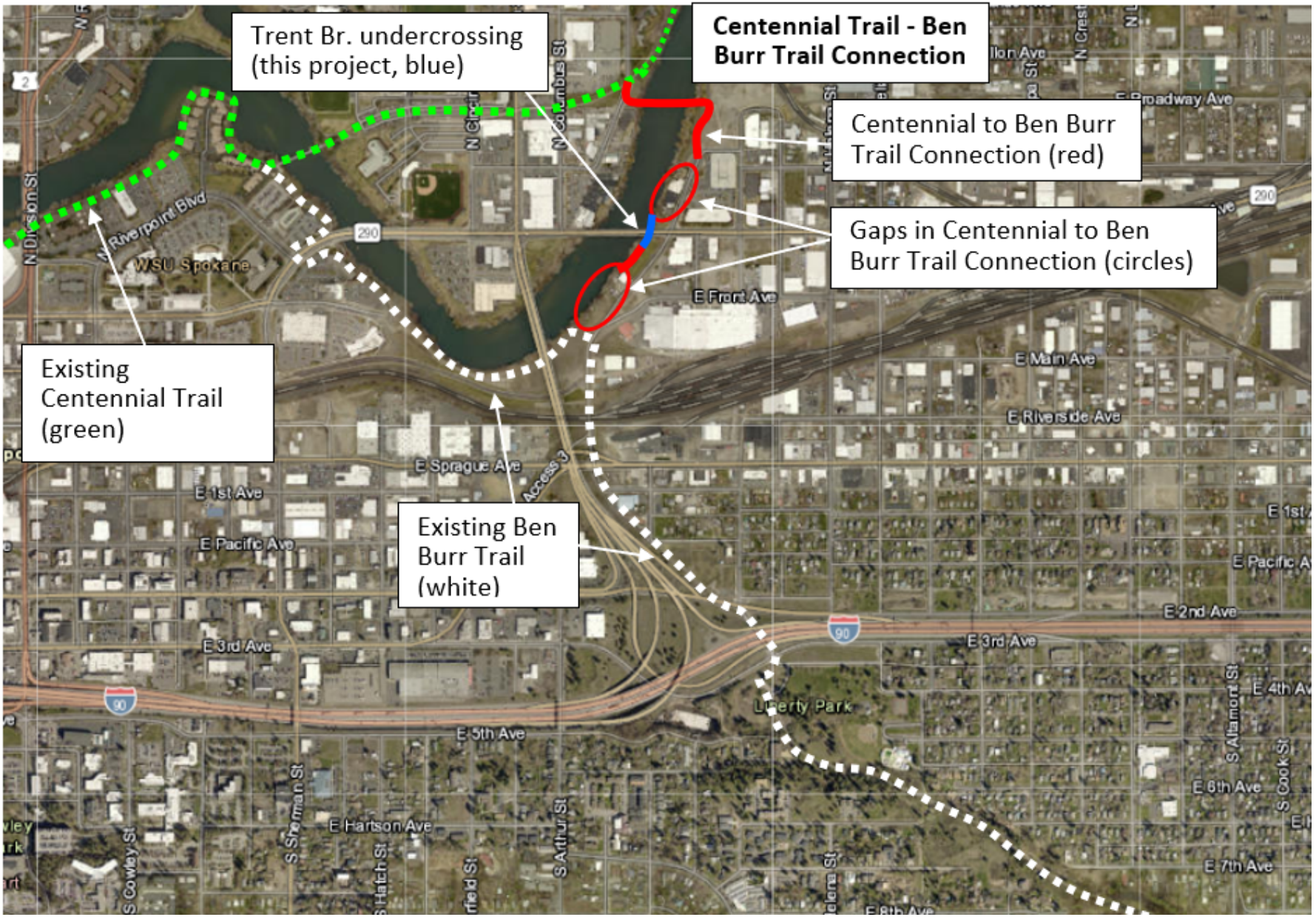
N/A – This contract supports multiple public works projects and should not impact racial, gender identity, national origin, income level, disability, sexual orientation or other existing disparity factors.

How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?

Public Works follows the City's established procurement and public works bidding regulations and policies to bring items forward, and then uses contract management best practices to ensure desired outcomes and regulatory compliance.

Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others?

The projects which will use this on-call contract are consistent with our adopted six year programs as well as the annual budget and strategic initiative to advance street maintenance activities.


Trent Br. undercrossing (this project, blue)
Centennial Trail - Ben Burr Trail Connection
Centennial to Ben Burr Trail Connection (red)
Gaps in Centennial to Ben Burr Trail Connection (circles)
Existing Centennial Trail (green)
Existing Ben Burr Trail (white)
N Dishman St
N Riverpoint Blvd
WSU Spokane
N Circle Dr
N Columbus St
E Broadway Ave
E Front Ave
E Main Ave
E Riverside Ave
E Sprague Ave
Access 3
E 1st Ave
E Pacific Ave
E 2nd Ave
E 3rd Ave
E 4th Ave
E 5th Ave
E 6th Ave
E 7th Ave
E 8th Ave
Liberty Park
S Sherman St
S Arthur St
S Cowley St
S Hatch St
S Altamont St
S Cook St
E Hartson Ave
290
90
2

City Clerk's No. 2021-0527

City of Spokane

CONTRACT AMENDMENT
WITH COSTS

ON-CALL GENERAL CIVIL ENGINEERING FOR 2021-2023 NON-FEDERAL AID PROJECTS

THIS CONTRACT AMENDMENT is between the **CITY OF SPOKANE**, a Washington State municipal corporation, as ("City"), and **PARAMETRIX, INC.** whose address is 835 North Post Street, Suite 201, Spokane, Washington 99201, as ("*Consultant*"), individually hereafter referenced as a "party", and together as the "parties".

WHEREAS, the parties entered into a Contract wherein the Consultant agreed to Provide ON-CALL GENERAL CIVIL ENGINEERING FOR 2021-2023 NON-FEDERAL AID PROJECTS for the City; and

WHEREAS, additional funds have been requested, thus, the original contract needs to be formally amended by this written document; and

Now, Therefore, the parties agree as follows:

1. DOCUMENTS. The original Contract dated August 17, 2021, any previous amendments and/or extensions/renewals thereto are incorporated by reference into this document as though written in full and shall remain in full force and effect except as provided herein.

2 EFFECTIVE DATE. This Contract Amendment shall become effective August 16, 2021 and shall end on July 31, 2023.

3. COMPENSATION. The City shall pay Consultant a maximum amount not to exceed **SIX HUNDRED THOUSAND AND NO/100 DOLLARS**, **($600,000.00)** for everything furnished and done under this Contract Amendment.

IN WITNESS WHEREOF, in consideration of the terms, conditions and covenants contained, or attached and incorporated and made a part, the parties have executed this Contract Amendment by having legally-binding representatives affix their signatures below.

PARAMETRIX INC.

By _____
Signature Date

_____
Print Name

_____
Title

_____
E-Mail Address

Attest:

_____
City Clerk Date

CITY OF SPOKANE

By _____
Signature Date

_____
Print Name

_____
Title

Approved as to form:

_____
Assistant City Attorney

22-172

Business Registration Information

Account Activity Status: Active

Date Registered: 01/14/2022

Date Renewal: 01/12/2022

Account Expiration Date: 01/14/2023

Roster & Business Type

Roster Type(s): Consultant

Business Type: Corporation

Number Of Employees: 151 - 499

Does your business qualify as a Small Business: No

Business Type: Corporation

Contact Information

Account Activity Status: Parametrix

Parent Company/Legal Business Name: Parametrix

Website URL: http://www.parametrix.com

Accept emergency work: Yes

Name: Nicole Mackie

Title: Regional Marketing Manager

Branch Location: Puyallup

Address: 1019 39th AVE SE, Suite 100 Puyallup, WA 98374

Phone: 253-604-6600

Fax:

Email: marketingtoolbox@parametrix.com

Email: marketingtoolbox@parametrix.com

MRSC Administrative Contact: Yes

Notify this contact about project new opportunities: check

Emergency Work Contact: check

Classifications & Licenses

UBI #: 600135349

Number of WA Employees: 151 - 499

Employment Security #:

Federal Tax ID #: 910914810

Certifications

Federally Disadvantaged Business Enterprise:

LGBT-Owned Business Enterprise:

Small Business Enterprise:

WA Disadvantaged Business Enterprise (DBE):

WA Minority Business Enterprise (MBE):

WA Minority Woman Business Enterprise (WMBE):

WA Woman Business Enterprise (WBE):

WA Combination Business Enterprise (CBE):

Veteran Owned:

Service Disabled Veteran Owned Small Business (SDVOSB):

HUBZone (Historically Underutilized Business Zone): No

8(a) Certified Firm by SBA: No

Upload a Statement of Qualifications

Parametrix_MRSC_Roster-2022.pdf
Download

Selected Services

Consultant

Building Department Services

- Building Code Plan Review
- Constructability Reviews
- Municipal Building Code Consulting

Building, Structure and Roadway Improvement Services

- Building Plan Review
- Construction Inspection
- Federal, State, and Local Agency Permitting
- Traffic Control Planning

Communication and Media Services

- Public Involvement Process and Support

Construction Management

- Claims Support
- Cost Estimating
- Program Management
- Project Controls
- Project Management
- Project Management Oversight
- Scheduling
- Staff Augmentation
- Utility Coordination

Design and Planning

- ADA Transition Planning
- CADD Services
- Climate Adaption Planning
- Community Planning
- Comprehensive Planning
- Design Guidelines
- Development Regulation, Codes, & Zoning
- Electrical Transportation Systems
- Environmental Planning

- Facilities Planning
- Feasibility Studies
- Green Stormwater Infrastructure
- Land Use Planning
- Light Detection & Ranging (LiDAR)
- Multi-modal Transportation Planning and Analysis
- Parking Analysis and Design
- Public Utility Planning
- Recreational Planning
- Roadway, Bikeway and Walkway Design
- Stormwater Permitting
- Structural Design and Analysis
- Subarea Planning
- Telemetry/SCADA
- Traffic Counts/Data Collection
- Traffic Operations Simulation Modeling
- Travel Demand Modeling
- Urban Design
- Urban Planning
- Water Right Permitting and Assessments
- Waterfront Planning

Engineering Services

- Bikeway Planning and Design
- Bridge Consulting
- Civil Engineering
- Construction Management
- Control Systems Engineering
- Corrosion Engineering and Investigations
- Electrical Engineering
- Environmental Engineering
- Ferry System Planning and Facility Design
- Hydraulic Design
- Investigative/Forensic Structural Engineering
- Marina and Coastal Engineering
- Mechanical Engineering
- Pavement Design and Analysis
- Pedestrian Path/Facilities Planning and Design
- Pump Station Design and Rehabilitation - Municipal Sewer Systems
- Pump Station Design and Rehabilitation - Municipal Water Systems
- Rail Systems Planning and Design
- Reservoir Rehabilitation and Replacement - Municipal Water Systems
- Roundabouts Planning and Design
- Seismic Assessment and Evaluation

- Sewer System Planning and Design
- Sewer System Renewal and Replacement Analysis
- Signal, Illumination and Electrical Design
- Solid Waste System Planning and Design
- Structural Engineering
- Subsurface Engineering
- Surface Mine Design
- Transit Planning and Design (including High Capita Transit)
- Transportation/Traffic
- Trenchless Pipeline Rehabilitation
- Value Engineering
- Wastewater Treatment Planning and Design
- Water System Management
- Water System Planning and Design
- Water System Renewal and Replacement Analysis

Environmental Consulting

- Aquatic Habitat Evaluation, Management and Improvement
- Basin Modeling - Hydrology/Hydraulics
- Biological Assessment and Evaluation
- Climate action planning
- Climate Change
- Comprehensive Environmental Review and Permitting
- Critical Areas Assessment, Mitigation and Restoration
- Development Plan Review and Inspection
- Environmental Database Design and Management
- Environmental Impact Assessment
- Environmental Studies
- Erosion Control/Streambank Stabilization
- Floodplain Analysis/Mapping
- Geology
- GIS (Geographic Information System)
- Hazardous Waste Consulting
- Hazardous Waste Site Remedial
- Hydrogeology
- Industrial Pretreatment
- Mapping and Vegetation Control
- Pollution Prevention
- Recycling and Sustainability Consulting
- Riparian Corridor Typing and Reach Analysis
- Shoreline Management
- Stormwater and Flow Monitoring
- Stormwater Research and Management
- Stream Sediment/Substrate Analyses

- Surface Mine Reclamation, Planning and Permitting
- Sustainability planning
- Water Conservation
- Water Quality and Biological Indicator Analysis
- Water Resources Consulting
- Wetland Delineation and Reporting
- Wetland Mitigation
- Wildlife Habitat Evaluation, Mitigation and Monitoring

Landscape Architecture

- Irrigation System Design - Small Scale
- Landscape Architecture
- Landscape Planning and Design
- Park Planning and Design
- Playground Planning and Design
- Sports Field Planning and Design

Miscellaneous Services

- Cost Estimating
- Owner's Representative
- Programmable Logic Controller (PLC)
- Project Management
- Technical and Grant Writing

Surveying and Mapping - All

- Hydrographic Surveying and Mapping
- Land Surveying and Mapping
- Surveying and Mapping

Selected Public Agency Rosters

Grant - All

- City of Electric City *
- City of Ephrata *
- City of George *
- City of Grand Coulee *
- City of Mattawa *
- City of Moses Lake *
- City of Quincy *
- City of Royal City *
- City of Soap Lake
- City of Warden

- Columbia Basin Hospital *
- Desert Aire Airport District *
- Grant County *
- Grant County Fire District # 13 *
- Grant County Fire District 10 *
- Grant County Fire Protection District #3 *
- Grant County Fire Protection District No. 8
- Grant County Mosquito Control District #1
- Grant County Port District #10
- Grant County Port District #5
- Grant County Port District #9
- Grant County Port District No.1
- Grant County Public Transportation Benefit Area d/b/a Grant Transit Authority *
- Multi-Agency Communications Center (MACC 911) *
- Port of Mattawa
- Quincy School District *
- Royal School District 160
- Samaritan Healthcare *
- Soap Lake School District *
- Town of Coulee City
- Town of Coulee Dam *
- Town of Hartline *

Grays Harbor - All

- Aberdeen School District #5 *
- City of Aberdeen *
- City of Cosmopolis *
- City of Hoquiam *
- City of McCleary *
- City of Oakville *
- City of Westport *
- East Grays Harbor Fire and Rescue *
- Elma School District No.68
- Grays Harbor Communications Center *
- Grays Harbor Conservation District
- Grays Harbor County *
- Grays Harbor County Fire Protection District No. 1 *
- Grays Harbor County Fire Protection District No. 2 *
- Grays Harbor County Public Hospital District No 1 *
- Grays Harbor County Water District #2 *
- Grays Harbor Fire District No. 10 *
- Grays Harbor PUD (Public Utility District No. 1 of Grays Harbor County) *
- Grays Harbor Transportation Authority *

- South Beach Regional Fire Authority *

Island - All

- Central Whidbey Island Fire and Rescue *
- City of Langley *
- City of Oak Harbor *
- Clinton Water District
- Holmes Harbor Sewer District *
- Island County Fire District #1 (Camano Island Fire & Rescue) *
- Juniper Beach Water District *
- North Whidbey Fire and Rescue *
- North Whidbey Pool, Park, and Recreation District *
- Port District of South Whidbey Island
- Port of Coupeville *
- South Whidbey Fire/EMS
- South Whidbey Parks and Recreation District *
- South Whidbey School District #206 *
- Town of Coupeville *
- Whidbey Island Public Hospital District

Jefferson - All

- City of Port Townsend *
- Fort Worden Public Development Authority *
- Jefferson County *
- Jefferson County Fire Protection District 1
- Jefferson County Fire Protection District No. 2 *
- Jefferson County Fire Protection District No. 3 *
- Jefferson County Rural Library District *
- Jefferson Transit Authority
- Port of Port Townsend
- Port Townsend School District # 50
- Quilcene School District No. 48 *

King - All

- Cascade Water Alliance
- Cedar River Water & Sewer District *
- City of Algona *
- City of Auburn
- City of Black Diamond *
- City of Bothell *
- City of Burien *
- City of Carnation *
- City of Clyde Hill *
- City of Covington *
- City of Des Moines *

- City of Duvall *
- City of Enumclaw
- City of Federal Way *
- City of Kenmore *
- City of Kent
- City of Kirkland *
- City of Lake Forest Park *
- City of Maple Valley
- City of Medina *
- City of Mercer Island *
- City of Newcastle *
- City of Normandy Park *
- City of North Bend *
- City of Pacific *
- City of Redmond *
- City of Renton *
- City of Sammamish *
- City of SeaTac *
- City of Shoreline *
- City of Snoqualmie
- City of Tukwila *
- Coal Creek Utility District *
- Community Roots Housing *
- Covington Water District *
- Des Moines Pool Metropolitan Park District
- Duvall-King County Fire District 45 *
- Eastside Fire & Rescue *
- Enumclaw Fire Department *
- Highlands Sewer District
- Highline Water District
- Historic Seattle Preservation and Development Authority *
- Kent School District No. 415 *
- King Conservation District *
- King County Fire District #39 *
- King County Fire District 20 *
- King County Fire District No. 2 *
- King County Fire Protection District #34
- King County Fire Protection District #47
- King County Housing Authority *
- King County Library System *
- King County Water District #117
- King County Water District #90 *
- King County Water District No. 49 *

- King County Water District No. 54 *
- Lake Forest Park Water District (King County Water District #83)
- Lake Meridian Water District
- Lake Washington School District #414 *
- Lakehaven Water and Sewer District *
- Mercer Island School District #400
- Meydenbauer Center (Bellevue Convention Center Authority)
- Midway Sewer District
- Mountain View Fire and Rescue *
- North East King County Regional Public Safety Communications Agency
- Northshore Fire Department
- Northshore Utility District *
- Puget Sound Educational Service District #121 *
- Puget Sound Emergency Radio Network *
- Puget Sound Regional Fire Authority *
- Renton Regional Fire Authority *
- Renton School District *
- Seattle Housing Authority
- Shoreline Fire Department *
- Shoreline School District
- Si View Metropolitan Park District *
- Skyway Water & Sewer District *
- Soos Creek Water and Sewer District *
- Sound Transit (Central Puget Sound Regional Transit Authority)
- South Correctional Agency (SCORE) *
- Southwest Suburban Sewer District
- Stevens Pass Sewer District *
- The Seattle Public Library *
- Town of Beaux Arts Village *
- Town of Hunts Point *
- Town of Skykomish *
- Town of Yarrow Point *
- Tukwila Pool Metropolitan Park District *
- Tukwila School District No. 406 *
- University of Washington - Facilities
- Valley Regional Fire Authority *
- Vashon Island School District
- Vashon Sewer District *
- Washington State Convention Center Public Facilities District *
- Water District 119 of King County *
- Water District 19 *
- Woodinville Water District *

Kitsap - All

- Bainbridge Island Fire Department *
- Bainbridge Island Metropolitan Park & Recreation District *
- Bremerton School District 100-C *
- Central Kitsap Fire and Rescue *
- Central Kitsap School District #401 *
- City of Bainbridge Island *
- City of Bremerton *
- City of Port Orchard *
- City of Poulsbo *
- Housing Authority of the City of Bremerton *
- Kitsap 911 Public Authority *
- Kitsap Conservation District *
- Kitsap County *
- Kitsap County Consolidated Housing Authority *
- Kitsap County Sewer District No. 7
- Kitsap Regional Library
- Kitsap Transit (Kitsap County Public Benefit Transportation Area Authority)
- Manchester Water District
- North Kitsap Fire & Rescue *
- North Kitsap School District
- North Perry Avenue Water District *
- Port of Bremerton *
- Port of Brownsville *
- Port of Kingston
- Port of Poulsbo *
- Poulsbo Fire Department *
- Silverdale Water District *
- South Kitsap Fire and Rescue *
- South Kitsap School District *
- West Sound Utility District #1 *

Kittitas - All

- City of Cle Elum *
- City of Ellensburg *
- City of Kittitas
- City of Roslyn
- Cle Elum - Roslyn School District No. 404 *
- Kittitas County *
- Kittitas County Conservation District
- Kittitas County Fire District #7 *
- Kittitas County Fire District No. 2 *
- Snoqualmie Pass Utility District *

Klickitat - All

- Centerville School District # 215
- City of Bingen
- Husum Fire Dept.-Klickitat CoFire Dist. 3 *
- Klickitat Valley Health
- Skyline Hospital
- Underwood Conservation District *
- White Salmon Valley School District
- Wishram School District 94

Lewis - All

- Centralia School District #401 *
- City of Chehalis *
- City of Mossyrock *
- City of Vader *
- Housing Authority of the City of Longview *
- Morton School District *
- Pe Ell School District
- Port of Chehalis
- Public Utility District No. 1 of Lewis County *
- Town of Pe Ell *
- Winlock School District

Lincoln - All

- City of Sprague *
- Lincoln County *
- Lincoln County Public Hospital District #1 *
- Reardan-Edwall School District No. 9 *
- Town of Odessa *
- Town of Wilbur

Mason - All

- City of Shelton *
- Hartstene Pointe Water Sewer District
- Hood Canal School District No. 404 *
- Lake Cushman Maintenance Company
- Mason Conservation District *
- Mason County *
- Mason County Fire District 5
- Mason County Fire Protection District 4 *
- Mason County Fire Protection District No. 6
- Mason County PUD No. 1
- Mason County PUD No. 3
- Mason Transit Authority (MTA) *
- North Mason Regional Fire Authority *
- North Mason School District #403 *

- Port of Allyn *
- Port of Hoodsport
- Port of Shelton *
- Public Hospital District No. 1 of Mason County, WA *

Okanogan - All

- Aeneas Lake Irrigation District
- City of Brewster *
- City of Omak *
- City of Pateros *
- Methow Valley School District
- Okanogan Conservation District
- Okanogan County Public Hospital District #4 *
- Okanogan County Transit Authority *
- Okanogan Douglas District Hospital #1
- Pateros School District
- Town of Conconully
- Town of Coulee Dam *

Pacific - All

- City of Ilwaco *
- City of Long Beach
- City of South Bend
- Housing Authority of the City of Longview *
- North Beach Water District *
- Pacific County *
- Public Utility District No. 2 of Pacific County *

Pend Oreille - All

- Pend Oreille County *
- Pend Oreille County Fire District #8
- Pend Oreille County Fire District 2
- Pend Oreille County Public Hospital District #1
- South Pend Oreille Fire & Rescue *
- Town of Ione *

Pierce - All

- Bethel School District
- Carbonado Historical School District #19 *
- Central Pierce Fire & Rescue *
- City of Bonney Lake *
- City of Buckley *
- City of DuPont *
- City of Edgewood *
- City of Fife *
- City of Fircrest *

- City of Gig Harbor *
- City of Lakewood *
- City of Milton *
- City of Orting *
- City of Puyallup *
- City of Roy *
- City of Ruston
- City of Sumner *
- City of University Place
- Clover Park School District #400
- Dieringer School District *
- East Pierce Fire & Rescue *
- Fife School District
- Key Peninsula Metropolitan Park District
- Lakewood Water District
- McKenna Water District
- Orting School District #344
- Peninsula Metropolitan Park District *
- Pierce Conservation District *
- Pierce County *
- Pierce County Fire District #14
- Pierce County Fire District #18 - Orting Valley Fire and Rescue *
- Pierce County Fire Protection Dist 17 *
- Pierce County Fire Protection District No. 21
- Pierce County Housing Authority *
- Pierce County Rural Library District *
- Pierce Transit *
- Platinum Earthworks
- Port of Tacoma
- South Sound 911 Public Authority *
- Steilacoom Historical School District #1 *
- Tacoma Housing Authority *
- Tacoma School District #10 *
- Tacoma-Pierce County Health Department *
- Town of Carbonado
- Town of Eatonville *
- Town of South Prairie *
- Town of Steilacoom
- Town of Wilkeson
- University Place School District
- Valley Water District *
- West Pierce Fire & Rescue (Pierce County Fire District No. 3) *
- White River School District #416

Adams - All

- Adams County *
- Adams County Fire District 5 Othello Fire
- City of Othello *
- City of Ritzville *
- East Columbia Basin Irrigation District *
- OTHELLO COMMUNITY HOSPITAL
- Port of Othello
- Town of Washtucna *
- Washtucna School District #109

San Juan - All

- Fisherman Bay Sewer District
- Orcas Island Library District
- San Juan County *
- San Juan County Fire District #3 *
- San Juan County Fire Protection District #2
- San Juan County Fire Protection District 5 *
- San Juan County Public Hospital District #3 *
- San Juan Island Library District *
- San Juan Island Park and Recreation District
- Shaw Island School District 10 *
- The Port of Orcas *
- Town of Friday Harbor *

Asotin - All

- Asotin-Anatone School District *

Skagit - All

- Central Skagit Rural Partial County Library District *
- City of Anacortes *
- City of Burlington *
- City of Mount Vernon
- City of Sedro-Woolley *
- Northwest Clean Air Agency
- Port of Skagit *
- Public Hospital District No. 1, Skagit County WA *
- Sedro-Woolley Housing Authority *
- Skagit County *
- Skagit County Dike & Drainage District Flood Control Partnership *
- Skagit County Fire District #11 *
- Skagit County Fire District 13
- Skagit County Public Hospital District No. 304
- Skagit Transit System *
- Town of Hamilton *

- Town of La Conner *
- Town of Lyman

Benton - All

- Ben Franklin Transit
- Benton Clean Air Agency
- Benton County *
- Benton County Fire District #1 *
- Benton County Fire Protection District 6 *
- Benton County Mosquito Control District #1
- Benton PUD - Public Utility District No. 1 of Benton County
- City of Benton City *
- City of Kennewick *
- City of Prosser *
- City of Richland *
- City of West Richland *
- Educational Service District 123
- Energy Northwest
- Kiona-Benton City School District
- Prosser Public Hospital District (Prosser Memorial Health)
- Richland Public Facilities District *
- West Benton Fire Rescue (West Benton Regional Fire Authority)

Skamania - All

- City of North Bonneville *
- Port of Friday Harbor *
- Port of Skamania County *
- Skamania County *
- Skamania County Public Hospital District No. 1 (dba Skamania County EMS) *
- Underwood Conservation District *

Chelan - All

- Chelan County Fire District 5 *
- Chelan County FPD 6 *
- Chelan County Public Hospital District #1
- Chelan County Public Hospital District #2
- Chelan-Douglas PTBA *
- City of Cashmere *
- City of Chelan
- City of Entiat
- City of Leavenworth
- City of Wenatchee
- Entiat School District 127
- Lake Wenatchee Fire & Rescue

- Stevens Pass Sewer District *
- The Greater Wenatchee Regional Events Center Public Facilities District
- Wenatchee School District #246

Snohomish - All

- Alderwood Water & Wastewater District *
- Arlington School District #16 *
- City of Arlington *
- City of Brier *
- City of Edmonds
- City of Everett *
- City of Gold Bar
- City of Granite Falls
- City of Lake Stevens *
- City of Lynnwood *
- City of Marysville *
- City of Mill Creek *
- City of Monroe *
- City of Mountlake Terrace
- City of Mukilteo *
- City of Snohomish *
- City of Stanwood *
- City of Sultan *
- Cross Valley Water District *
- Edmonds Public Facilities District
- Edmonds School District #15
- Everett Public Facilities District *
- Highland Water District *
- Housing Authority of Snohomish County *
- Lake Stevens Sewer District *
- Lakewood School District No. 306 *
- Lynnwood Public Facilities District *
- Marysville Fire District *
- Mukilteo Water and Wastewater District *
- North County Regional Fire Authority *
- Olympic View Water & Sewer District *
- Port of Edmonds *
- Port of Everett *
- Public Hospital District No. 3, Snohomish County
- Silver Lake Water & Sewer District *
- Sno-Isle Intercounty Rural Library District *
- Snohomish Conservation District *
- SNOHOMISH COUNTY 911 *
- Snohomish County Fire District #26

- Snohomish County Fire District #4 *
- Snohomish County Fire District #5 *
- Snohomish County Fire District 17 *
- Snohomish County Fire District 19 *
- Snohomish County Fire Protection District No. 21 *
- Snohomish County Public Hospital District 2 *
- Snohomish Regional Fire & Rescue *
- Snohomish School District *
- South Snohomish County Fire and Rescue *
- Town of Darrington
- Town of Woodway *
- Washington School Information Processing Cooperative

Clallam - All

- City of Forks *
- City of Port Angeles *
- City of Sequim *
- Clallam County Fire District #3 *
- Clallam County Fire Protection District #6
- Clallam County Fire Protection District No. 2 *
- Clallam County Fire Protection District No. 4 *
- Peninsula Housing Authority *
- Port of Port Angeles
- PUD No. 1 of Clallam County
- Sunland Water District *

Spokane - All

- Cheney Public Schools (Cheney School District # 360) *
- City of Airway Heights *
- City of Cheney *
- City of Liberty Lake *
- City of Medical Lake *
- City of Millwood *
- City of Spokane *
- City of Spokane Valley *
- East Valley School District No. 361
- Enduris Washington *
- Northeast Public Development Authority *
- Northwest Open Access Network
- Orchard Prairie School District *
- Spokane Conservation District
- Spokane County
- Spokane County Fire District 10 *
- Spokane County Fire District 4 *

- Spokane County Fire District 9 *
- Spokane County Fire Protection District No 8 *
- Spokane Public Facilities District *
- Spokane Regional Clean Air Agency *
- Spokane Regional Health District *
- Spokane Valley Fire Department *
- University District Public Development Authority *
- West Plains Airport Area Public Development Authority *

Clark - All

- C-Tran (Clark County Public Transportation Benefit Area) *
- City of Battle Ground
- City of Camas *
- City of La Center *
- City of Ridgefield *
- City of Vancouver *
- City of Washougal *
- City of Woodland *
- Clark County *
- Clark County Fire District #13 *
- Clark County Fire District 5
- Clark Regional Wastewater District *
- East County Fire and Rescue *
- ESD112 Construction Services Group
- Evergreen School District #114
- Fort Vancouver Regional Library District *
- La Center School District *
- North Country EMS *
- Port of Ridgefield *
- Ridgefield School District *
- The Southwest Washington Council of Governments on Aging & Disabilities *
- Town of Yacolt
- Vancouver Housing Authority
- Washougal School District 06-112 *

Stevens - All

- City of Kettle Falls
- Colville School District 115 *
- Public Utility District No. 1 of Stevens County *
- Stevens County *
- Summit Valley School District #202 *
- Town of Marcus
- Town of Northport

- Town of Springdale *

Columbia - All

- City of Dayton *
- Dayton School District

Thurston - All

- City of Lacey
- City of Olympia
- City of Rainier
- City of Tenino *
- City of Tumwater
- City of Yelm *
- Griffin School District #324
- Lacey Fire District 3 *
- LOTT Clean Water Alliance
- Olympia School District
- Olympic Region Clean Air Agency
- Port of Olympia
- Thurston 911 Communications *
- Thurston Conservation District *
- Thurston County *
- Thurston County Fire District #6 *
- Thurston County Fire District 9 *
- Thurston County Fire Protection District #17 *
- Thurston County Fire Protection District 12 *
- Thurston County Fire Protection District 13 *
- Thurston County Fire Protection District 8 *
- Timberland Regional Library *
- Town of Bucoda *
- Tumwater School District #33
- Washington State Transit Insurance
- West Thurston Regional Fire Authority *

Cowlitz - All

- Beacon Hill Water and Sewer District *
- City of Castle Rock *
- City of Kalama *
- City of Kelso
- City of Longview
- City of Woodland *
- Cowlitz 911 Public Authority *
- Cowlitz County *
- Cowlitz County Fire District #5 *
- Cowlitz County Fire District 6

- Cowlitz County Fire Protection District #1 *
- Housing Authority of the City of Longview *
- Kalama School District No. 402 *
- Kelso School District No. 458 *
- Port of Kalama
- Port of Longview *
- Three Rivers Regional Wastewater Authority
- Woodland School District #404 *

Wahkiakum - All

- Town of Cathlamet *

Douglas - All

- Bridgeport School District *
- City of Bridgeport *
- City of East Wenatchee *
- City of Rock Island
- Douglas County *
- Douglas County Fire District #4 *
- Eastmont Metropolitan Park District
- Eastmont School District No. 206
- Foster Creek Conservation District *
- Greater Bar Water District *
- Greater Wenatchee Irrigation *
- Orondo School District
- Palisades School District #102 *
- Public Utility District No. 1 of Douglas County
- Town of Coulee Dam *
- Town of Mansfield *
- Town of Waterville *
- Waterville School District #209 *

Walla Walla - All

- City of College Place *
- City of Waitsburg *
- City of Walla Walla
- COLUMBIA SCHOOL DISTRICT #400 *
- Waitsburg School District *
- Walla Walla County Rural Library District *

Ferry - All

- Ferry County *
- Inchelium School District #70 *

Whatcom - All

- Bellingham School District No. 501

- Birch Bay Water & Sewer District
- City of Bellingham *
- City of Blaine *
- City of Everson *
- City of Ferndale *
- City of Nooksack *
- City of Sumas *
- Glacier Water District
- Lake Whatcom Water & Sewer District *
- Point Roberts Water District No. 4
- Port of Bellingham
- Samish Water District
- Western Washington University
- Whatcom Conservation District *
- Whatcom County
- Whatcom County Fire District 14 *
- Whatcom County Rural Library District
- Whatcom Transportation Authority

Franklin - All

- City of Connell *
- City of Kahlotus *
- City of Pasco *
- Franklin County *
- Franklin County Fire Protection District No. 3 *
- Franklin County Public Hospital District #1 *
- Kahlotus School District #056
- Mid-Columbia Library *
- North Franklin School District
- South Columbia Basin Irrigation District *

Whitman - All

- City of Colfax *
- Port of Whitman County
- Town of Endicott
- Town of Lamont *
- Town of Rosalia
- Town of Uniontown *
- Whitman County F.P.D 7 *
- Whitman Hospital and Medical Center *

Yakima - All

- City of Granger
- City of Mabton *
- City of Moxee

- City of Selah
- City of Sunnyside *
- City of Toppenish *
- City of Wapato
- City of Yakima
- City of Zillah *
- Highland School District #203 *
- Roza Irrigation District *
- Roza Sunnyside Board of Joint Control *
- Terrace Heights Sewer District
- Yakima County *
- Yakima Valley Libraries

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 2/18/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER AssuredPartners Design Professionals Insurance Services, LLC 3697 Mt. Diablo Blvd Suite 230 Lafayette CA 94549 License#: 6003745	**CONTACT NAME:** Jennifer Aguirre **PHONE (A/C, No, Ext):** (510) 465-3090 **FAX (A/C, No):** **E-MAIL ADDRESS:** DesignProCerts@AssuredPartners.com
INSURED PARAINC-01 Parametrix, Inc. 1019 39th Ave. SE Suite 100 Puyallup, WA 98374 (253) 604-6600	**INSURER(S) AFFORDING COVERAGE** / **NAIC #** **INSURER A :** National Fire Insurance Co of Hartford / 20478 **INSURER B :** Continental Insurance Company / 35289 **INSURER C :** XL Specialty Insurance Co. / 37885 **INSURER D :** Valley Forge Insurance Company / 20508 **INSURER E :** Continental Casualty Company / 20443 **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 424081761 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** [ ] CLAIMS-MADE [X] OCCUR X Contractual Liab X XCU Included GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC X OTHER: WA Stop Gap/EL	Y	Y	6050531366	11/1/2021	11/1/2022	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG WA Stop Gap	$ 1,000,000 $ 1,000,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $ 1,000,000
D	**AUTOMOBILE LIABILITY** X ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS X HIRED AUTOS ONLY X NON-OWNED AUTOS ONLY	Y	Y	6050531352	11/1/2021	11/1/2022	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
B	X **UMBRELLA LIAB** X OCCUR **EXCESS LIAB** [ ] CLAIMS-MADE DED X RETENTION $ 0	Y	Y	6050531433	11/1/2021	11/1/2022	EACH OCCURRENCE AGGREGATE	$ 15,000,000 $ 15,000,000
E E	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y / N ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A	Y	6050531383 6050531402	11/1/2021 11/1/2021	11/1/2022 11/1/2022	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	WA Stop Gap $ 1,000,000 $ 1,000,000 $ 1,000,000
C	Professional Liability Claims Made Pollution Liability Included		Y	DPR9984842	11/1/2021	11/1/2022	Per Claim Annual Aggregate Retroactive Date:	$1,000,000 $1,000,000 01/01/1969

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Umbrella Liability policy is a follow-form to underlying General Liability/Auto Liability/Employers Liability.
Project Name: City of Spokane 2021-2022 On-Call Services --

City of Spokane, its officers and employees are named as Additional Insured on General Liability and Auto Liability, per policy forms, with respect to the operations of the Named Insured as required by written contract or agreement.

CERTIFICATE HOLDER

City of Spokane
Attn: Dan Buller
808 W. Spokane Falls Blvd.
Spokane WA 99201

CANCELLATION 30 Days Notice of Cancellation

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

CNA

CNA PARAMOUNT

Blanket Additional Insured - Owners, Lessees or Contractors - with Products-Completed Operations Coverage Endorsement

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

It is understood and agreed as follows:

I. The **WHO IS AN INSURED** section is amended to add as an **Insured** any person or organization whom the **Named Insured** is required by **written contract** to add as an additional insured on this **coverage part,** including any such person or organization, if any, specifically set forth on the Schedule attachment to this endorsement. However, such person or organization is an **Insured** only with respect to such person or organization's liability for:

A. unless paragraph **B.** below applies,

1. **bodily injury**, **property damage**, or **personal and advertising injury** caused in whole or in part by the acts or omissions by or on behalf of the **Named Insured** and in the performance of such **Named Insured's** ongoing operations as specified in such **written contract**; or

2. **bodily injury** or **property damage** caused in whole or in part by **your work** and included in the **products-completed operations** hazard, and only if

a. the **written contract** requires the **Named Insured** to provide the additional insured such coverage; and

b. this **coverage part** provides such coverage.

B. **bodily injury, property damage,** or **personal and advertising injury** arising out of **your work** described in such **written contract**, but only if:

1. this **coverage part** provides coverage for **bodily injury** or **property damage** included within the **products completed operations hazard**; and

2. the **written contract** specifically requires the **Named Insured** to provide additional insured coverage under the 11-85 or 10-01 edition of CG2010 or the 10-01 edition of CG2037.

II. Subject always to the terms and conditions of this policy, including the limits of insurance, the Insurer will not provide such additional insured with:

A. coverage broader than required by the **written contract**; or

B. a higher limit of insurance than required by the **written contract**.

III. The insurance granted by this endorsement to the additional insured does not apply to **bodily injury**, **property damage**, or **personal and advertising injury** arising out of:

A. the rendering of, or the failure to render, any professional architectural, engineering, or surveying services, including:

1. the preparing, approving, or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; and

2. supervisory, inspection, architectural or engineering activities; or

B. any premises or work for which the additional insured is specifically listed as an additional insured on another endorsement attached to this **coverage part**.

IV. Notwithstanding anything to the contrary in the section entitled **COMMERCIAL GENERAL LIABILITY CONDITIONS,** the Condition entitled **Other Insurance**, this insurance is excess of all other insurance available to the additional insured whether on a primary, excess, contingent or any other basis. However, if this insurance is required by **written**

contract to be primary and non-contributory, this insurance will be primary and non-contributory relative solely to insurance on which the additional insured is a named insured.

V. Solely with respect to the insurance granted by this endorsement, the section entitled **COMMERCIAL GENERAL LIABILITY CONDITIONS** is amended as follows:

The Condition entitled **Duties In The Event of Occurrence, Offense, Claim or Suit** is amended with the addition of the following:

Any additional insured pursuant to this endorsement will as soon as practicable:

1. give the Insurer written notice of any **claim**, or any **occurrence** or offense which may result in a **claim**;

2. except as provided in Paragraph IV. of this endorsement, agree to make available any other insurance the additional insured has for any loss covered under this **coverage part**;

3. send the Insurer copies of all legal papers received, and otherwise cooperate with the Insurer in the investigation, defense, or settlement of the **claim**; and

4. tender the defense and indemnity of any **claim** to any other insurer or self insurer whose policy or program applies to a loss that the Insurer covers under this **coverage part**. However, if the **written contract** requires this insurance to be primary and non-contributory, this paragraph **(4)** does not apply to insurance on which the additional insured is a named insured.

The Insurer has no duty to defend or indemnify an additional insured under this endorsement until the Insurer receives written notice of a **claim** from the additional insured.

VI. Solely with respect to the insurance granted by this endorsement, the section entitled **DEFINITIONS** is amended to add the following definition:

Written contract means a written contract or written agreement that requires the **Named Insured** to make a person or organization an additional insured on this **coverage part**, provided the contract or agreement:

A. is currently in effect or becomes effective during the term of this policy; and

B. was executed prior to:

1. the **bodily injury** or **property damage**; or

2. the offense that caused the **personal and advertising injury**

for which the additional insured seeks coverage.

Any coverage granted by this endorsement shall apply solely to the extent permissible by law.

All other terms and conditions of the Policy remain unchanged.

This endorsement, which forms a part of and is for attachment to the Policy issued by the designated Insurers, takes effect on the effective date of said Policy at the hour stated in said Policy, unless another effective date is shown below, and expires concurrently with said Policy.

CNA

CNA PARAMOUNT

Waiver of Transfer of Rights of Recovery Against Others to the Insurer Endorsement

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE
Name Of Person Or Organization:
ANY PERSON OR ORGANIZATION WHOM THE NAMED INSURED HAS AGREED IN WRITING IN A CONTRACT OR AGREEMENT TO WAIVE SUCH RIGHTS OF RECOVERY, BUT ONLY IF SUCH CONTRACT OR AGREEMENT:
1. IS IN EFFECT OR BECOMES EFFECTIVE DURING THE TERM OF THIS COVERAGE PART; AND 2. WAS EXECUTED PRIOR TO THE BODILY INJURY, PROPERTY DAMAGE OR PERSONAL AND ADVERTISING INJURY GIVING RISE TO THE CLAIM.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

It is understood and agreed that the condition entitled **Transfer Of Rights Of Recovery Against Others To The Insurer** is amended by the addition of the following:

Solely with respect to the person or organization shown in the Schedule above, the Insurer waives any right of recovery the Insurer may have against such person or organization because of payments the Insurer makes for injury or damage arising out of the **Named Insured's** ongoing operations or **your work** done under a contract with that person or organization and included in the **products-completed operations hazard**.

All other terms and conditions of the Policy remain unchanged.

This endorsement, which forms a part of and is for attachment to the Policy issued by the designated Insurers, takes effect on the effective date of said Policy at the hour stated in said Policy, unless another effective date is shown below, and expires concurrently with said Policy.

10020006605053136654 78

CONTRACTORS EXTENDED COVERAGE ENDORSEMENT - BUSINESS AUTO PLUS

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM

I. LIABILITY COVERAGE

A. Who Is An Insured

The following is added to **Section II, Paragraph A.1., Who Is An Insured**:

1. **a.** Any incorporated entity of which the Named Insured owns a majority of the voting stock on the date of inception of this Coverage Form; provided that,

   b. The insurance afforded by this provision **A.1.** does not apply to any such entity that is an **insured** under any other liability "policy" providing **auto** coverage.

2. Any organization you newly acquire or form, other than a limited liability company, partnership or joint venture, and over which you maintain majority ownership interest.

   The insurance afforded by this provision **A.2.**:

   a. Is effective on the acquisition or formation date, and is afforded only until the end of the policy period of this Coverage Form, or the next anniversary of its inception date, whichever is earlier.

   b. Does not apply to:

   (1) **Bodily injury** or **property damage** caused by an **accident** that occurred before you acquired or formed the organization; or

   (2) Any such organization that is an **insured** under any other liability "policy" providing **auto** coverage.

3. Any person or organization that you are required by a written contract to name as an additional insured is an **insured** but only with respect to their legal liability for acts or omissions of a person, who qualifies as an **insured** under **SECTION II – WHO IS AN INSURED** and for whom Liability Coverage is afforded under this policy. If required by written contract, this insurance will be primary and non-contributory to insurance on which the additional insured is a Named Insured.

4. An **employee** of yours is an **insured** while operating an **auto** hired or rented under a contract or agreement in that **employee's** name, with your permission, while performing duties related to the conduct of your business.

"Policy", as used in this provision **A. Who Is An Insured,** includes those policies that were in force on the inception date of this Coverage Form but:

1. Which are no longer in force; or
2. Whose limits have been exhausted.

B. Bail Bonds and Loss of Earnings

Section II, Paragraphs A.2. (2) and A.2. (4) are revised as follows:

1. In **a.(2),** the limit for the cost of bail bonds is changed from $2,000 to $5,000; and
2. In **a.(4),** the limit for the loss of earnings is changed from $250 to $500 a day.

C. Fellow Employee

Section II, Paragraph B.5 does not apply.

Such coverage as is afforded by this provision C. is excess over any other collectible insurance.

II. PHYSICAL DAMAGE COVERAGE

A. Glass Breakage – Hitting A Bird Or Animal – Falling Objects Or Missiles

The following is added to **Section III, Paragraph A.3.**:

With respect to any covered **auto**, any deductible shown in the Declarations will not apply to glass breakage if such glass is repaired, in a manner acceptable to us, rather than replaced.

B. Transportation Expenses

Section III, Paragraph A.4.a. is revised, with respect to transportation expense incurred by you, to provide:

a. $60 per day, in lieu of $20; subject to

b. $1,800 maximum, in lieu of $600.

C. Loss of Use Expenses

Section III, Paragraph A.4.b. is revised, with respect to loss of use expenses incurred by you, to provide:

a. $1,000 maximum, in lieu of $600.

D. Hired "Autos"

The following is added to **Section III. Paragraph A.**:

5. Hired "Autos"

If Physical Damage coverage is provided under this policy, and such coverage does not extend to Hired Autos, then Physical Damage coverage is extended to:

a. Any covered **auto** you lease, hire, rent or borrow without a driver; and

b. Any covered **auto** hired or rented by your **employee** without a driver, under a contract in that individual **employee's** name, with your permission, while performing duties related to the conduct of your business.

c. The most we will pay for any one **accident** or **loss** is the actual cash value, cost of repair, cost of replacement or $75,000, whichever is less, minus a $500 deductible for each covered auto. No deductible applies to **loss** caused by fire or lightning.

d. The physical damage coverage as is provided by this provision is equal to the physical damage coverage(s) provided on your owned **autos**.

e. Such physical damage coverage for hired **autos** will:

(1) Include loss of use, provided it is the consequence of an **accident** for which the Named Insured is legally liable, and as a result of which a monetary loss is sustained by the leasing or rental concern.

(2) Such coverage as is provided by this provision will be subject to a limit of $750 per **accident**.

E. Airbag Coverage

The following is added to **Section III, Paragraph B.3.**:

The accidental discharge of an airbag shall not be considered mechanical breakdown.

F. Electronic Equipment

Section III, Paragraphs B.4.c and B.4.d. are deleted and replaced by the following:

c. Physical Damage Coverage on a covered **auto** also applies to **loss** to any permanently installed electronic equipment including its antennas and other accessories

d. A $100 per occurrence deductible applies to the coverage provided by this provision.

G. Diminution In Value

The following is added to **Section III, Paragraph B.6.**:

Subject to the following, the **diminution in value** exclusion does not apply to:

a. Any covered **auto** of the private passenger type you lease, hire, rent or borrow, without a driver for a period of 30 days or less, while performing duties related to the conduct of your business; and

b. Any covered **auto** of the private passenger type hired or rented by your **employee** without a driver for a period of 30 days or less, under a contract in that individual **employee's** name, with your permission, while performing duties related to the conduct of your business.

c. Such coverage as is provided by this provision is limited to a **diminution in value** loss arising directly out of accidental damage and not as a result of the failure to make repairs; faulty or incomplete maintenance or repairs; or the installation of substandard parts.

d. The most we will pay for **loss** to a covered **auto** in any one accident is the lesser of:

(1) $5,000; or

(2) 20% of the **auto's** actual cash value (ACV).

III. Drive Other Car Coverage – Executive Officers

The following is added to **Sections II and III**:

1. Any **auto** you don't own, hire or borrow is a covered **auto** for Liability Coverage while being used by, and for Physical Damage Coverage while in the care, custody or control of, any of your "executive officers", except:

   a. An **auto** owned by that "executive officer" or a member of that person's household; or

   b. An **auto** used by that "executive officer" while working in a business of selling, servicing, repairing or parking **autos**.

   Such Liability and/or Physical Damage Coverage as is afforded by this provision.

   (1) Equal to the greatest of those coverages afforded any covered **auto**; and

   (2) Excess over any other collectible insurance.

2. For purposes of this provision, "executive officer" means a person holding any of the officer positions created by your charter, constitution, by-laws or any other similar governing document, and, while a resident of the same household, includes that person's spouse.

   Such "executive officers" are **insureds** while using a covered **auto** described in this provision.

IV. BUSINESS AUTO CONDITIONS

A. Duties In The Event Of Accident, Claim, Suit Or Loss

The following is added to **Section IV, Paragraph A.2.a.**:

(4) Your **employees** may know of an **accident** or **loss**. This will not mean that you have such knowledge, unless such **accident** or **loss** is known to you or if you are not an individual, to any of your executive officers or partners or your insurance manager.

The following is added to **Section IV, Paragraph A.2.b.**:

(6) Your **employees** may know of documents received concerning a claim or **suit**. This will not mean that you have such knowledge, unless receipt of such documents is known to you or if you are not an individual, to any of your executive officers or partners or your insurance manager.

B. Transfer Of Rights Of Recovery Against Others To Us

The following is added to **Section IV, Paragraph A.5. Transfer Of Rights Of Recovery Against Others To Us**:

We waive any right of recovery we may have, because of payments we make for injury or damage, against any person or organization for whom or which you are required by written contract or agreement to obtain this waiver from us.

This injury or damage must arise out of your activities under a contract with that person or organization.

You must agree to that requirement prior to an **accident** or **loss**.

C. Concealment, Misrepresentation or Fraud

The following is added to **Section IV, Paragraph B.2.**:

Your failure to disclose all hazards existing on the date of inception of this Coverage Form shall not prejudice you with respect to the coverage afforded provided such failure or omission is not intentional.

D. Other Insurance

The following is added to **Section IV, Paragraph B.5.**:

Regardless of the provisions of Paragraphs **5.a.** and **5.d.** above, the coverage provided by this policy shall be on a primary non-contributory basis. This provision is applicable only when required by a written contract.

That written contract must have been entered into prior to **Accident** or **Loss**.

E. Policy Period, Coverage Territory

Section IV, Paragraph B. 7.(5).(a). is revised to provide:

a. 45 days of coverage in lieu of 30 days.

V. DEFINITIONS

Section V. paragraph C. is deleted and replaced by the following:

Bodily injury means bodily injury, sickness or disease sustained by a person, including mental anguish, mental injury or death resulting from any of these.

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule.

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

Any Person or Organization on whose behalf you are required to obtain this waiver of our right to recover from under a written contract or agreement.

The premium charge for the endorsement is reflected in the Schedule of Operations.

All other terms and conditions of the policy remain unchanged.

This endorsement, which forms a part of and is for attachment to the policy issued by the designated Insurers, takes effect on the Policy Effective Date of said policy at the hour stated in said policy, unless another effective date (the Endorsement Effective Date) is shown below, and expires concurrently with said policy unless another expiration date is shown below.

BLANKET WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS

This endorsement changes the policy to which it is attached.

It is agreed that **Part One - Workers' Compensation Insurance G. Recovery From Others** and **Part Two - Employers' Liability Insurance H. Recovery From Others** are amended by adding the following:

We will not enforce our right to recover against persons or organizations. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

PREMIUM CHARGE - Refer to the Schedule of Operations

The charge will be an amount to which you and we agree that is a percentage of the total standard premium for California exposure. The amount is 2%.

All other terms and conditions of the policy remain unchanged.

This endorsement, which forms a part of and is for attachment to the policy issued by the designated Insurers, takes effect on the Policy Effective Date of said policy at the hour stated in said policy, unless another effective date (the Endorsement Effective Date) is shown below, and expires concurrently with said policy unless another expiration date is shown below.

Agenda Sheet for City Council Meeting of: 10/10/2022		**Date Rec'd**	9/28/2022
		Clerk's File #	OPR 1984-0475
		Renews #	
Submitting Dept	PUBLIC WORKS	**Cross Ref #**	
Contact Name/Phone	MARLENE FEIST 625-6505	**Project #**	
Contact E-Mail	MFEIST@SPOKANECITY.ORG	**Bid #**	
Agenda Item Type	Contract Item	**Requisition #**	
Agenda Item Name	4100 - AIRWAY HEIGHTS WATER SUPPLY AGREEMENT		

Agenda Wording

Agreement with Airway Heights to provide for additional short-term supplemental emergency water supply and water modeling/analysis.

Summary (Background)

On April 12, 2018, the City approved an agreement to provide the City of Airway Heights with additional short-term supplemental emergency water. This amendment extends this agreement to June 15, 2026, and provides for increased collaboration as well as reimbursement to the city for water modeling and analysis in relation to Airway Heights water infrastructure analysis.

Lease? NO Grant related? NO Public Works? NO

Fiscal Impact		**Budget Account**
Revenue	**$** 87,884.72	**#** 0
Expense	**$** 87,884.72	**#** 0
Select	**$**	**#**
Select	**$**	**#**

Approvals		**Council Notifications**	
Dept Head	MILLER, KATHERINE E	**Study Session\Other**	PIES 9/26
Division Director	MILLER, KATHERINE E	**Council Sponsor**	Beggs/Bingle
Finance	ALBIN-MOORE, ANGELA	**Distribution List**	
Legal	HARRINGTON, MARGARET	publicworksaccounting@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	mfeist@spokanecity.org	
Additional Approvals		eschoedel@spokanecity.org	
Purchasing		eraea@spokanecity.org	
		bpatrick@spokanecity.org	

Committee Agenda Sheet
Public Infrastructure, Environment & Sustainability (PIES)

Submitting Department	Public Works Division
Contact Name & Phone	Marlene Feist (509) 625-6505
Contact Email	mfeist@spokanecity.org
Council Sponsor(s)	Council Member Kinnear
Select Agenda Item Type	☐ Consent ☒ Discussion Time Requested: 10 mins
Agenda Item Name	2022 Amendment to Airway Heights Emergency Water Agreement
Summary (Background)	City of Spokane has been providing emergency water service to Airway Heights due to contamination in Airway Heights groundwater source for drinking water since the contamination was discovered in 2017. On April 12, 2018, the City approved an agreement to provide the City of Airway Heights (AH) with additional short-term supplemental emergency water in the amount of 1,400 gpm. The agreement included a two-year initial term with 3 one-year extensions. Water overall is limited in the two water pressure zones (SIA & West Plains) that serve AH at this time. Delivery of additional water is possible in the future with the completion of infrastructure improvements. Airway Heights has interest in additional water from Spokane, at least until they are able to develop a long-term or permanent solution for water supply. The City and Airway Heights have reached consensus on an update to our agreement. The update would: • Extend the current emergency provisions previously negotiated. • Include the last year of the 3 one-year extensions of the original agreement and an additional 3-year term. • Provide for close collaboration and cooperation for the life of the agreement. • Provide for Airway Heights' support for efforts to gain grants or loans for the West Plains booster station. • Provides for Airway Heights to contribute $87,884.72 for flow modeling, concept designs and cost estimates associated with Spokane's ability to provide continued and increased water supply to Airway Heights. • Commits Spokane to evaluate future funding, capacity and water rates.
Proposed Council Action & Date:	Approve an amendment & extension of the Spokane-Airway Heights water supply agreement in October 2022.

Fiscal Impact:
Total Cost:
Approved in current year budget? ☐ Yes ☐ No ☒ N/A

Funding Source ☐ One-time ☐ Recurring
Specify funding source:

Expense Occurrence ☐ One-time ☐ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts

What impacts would the proposal have on historically excluded communities?

Public Works services and projects are designed to serve all citizens and businesses. We strive to offer a consistent level of service to all, to distribute public investment throughout the community, and to respond to gaps in services identified in various City plans. We recognize the need to maintain affordability and predictability for utility customers. And we are committed to delivering work that is both financially and environmentally responsible. This item supports the operations of Public Works.

How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities?

N/A – This work is designed to manage costs and continue service delivery in support of all citizens and taxpayers. It will not impact racial, gender identity, national origin, income level, disability, sexual orientation or other existing disparity factors.

How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?

Public Works follows the City's established procurement and public works bidding regulations and policies to bring items forward, and then uses contract management best practices to ensure desired outcomes and regulatory compliance.

Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others?

This work is consistent with annual budget strategies to limit costs and approved projects in the 6-year CIP.

City Clerk's No. OPR 1984-0475

City of Spokane

#3 of 3 Extension of the Amended Water Supply Agreement between City of Spokane and City of Airway Heights &
1st Amendment to the Amended Water Supply Agreement between City of Spokane and City of Airway Heights

This Extension of the Amended Water Supply Agreement between Spokane and Airway Heights and Emergency Water Service Agreement ("Extension") and 1st Amendment of the Amended Water Supply Agreement between Spokane and Airway Heights and Emergency Water Service Agreement ("1st Amendment") is made and entered into by and between the **City of Spokane** ("City" or "Spokane"), a Washington municipal corporation, and **City of Airway Heights**, whose address is 1208 South Lundstrom, Airway Heights, Washington 99001 ("Airway Heights") (collectively referred to as the "Parties").

WHEREAS, the parties entered into an Amended Water Supply Agreement and Emergency Water Service Agreement ("Agreement") on April 12, 2018, wherein the City agreed to provide to Airway Heights additional short term supplemental emergency water in the amount of approximately 1,400 gpm for a period of two (2) years from the initial date of emergency water service; and

WHEREAS, paragraph 5.2.1 of the Agreement provides for the Parties to agree and execute an extension extending the term for emergency supplemental water in additional one-year increments, not to exceed three (3) one-year extensions, effective June 15th; and

WHEREAS, Airway Heights has requested extension of the Agreement and said Extension is the final third of 3 one-year extensions as provided for in the Agreement; and

WHEREAS, Airway Heights has requested an amendment of the Agreement to include an additional three-year extension to allow for progress towards a long-term or permanent solution for water supply ("1st Amendment"); and

WHEREAS, Airway Heights has additionally requested an increase in the additional water supplies and volume from Spokane to support its continued water usage and is willing to contribute towards the costs associated with the flow modeling needed to evaluate the impacts of the additional water requested by Airway Heights and possible timing of available water; and

WHEREAS, Airway Heights has filed an application with Washington State Department of Ecology for new water in the Spokane Rathdrum Prairie Aquifer, which remains pending, but also intends to continue to purchase a portion of water from Spokane to supplement water needs; and

WHEREAS, the U.S. Congress has authorized the Infrastructure Investment and Jobs Act to fund drinking water projects in communities with water contaminated by PFAS. Airway Heights is committed to partnering with and supporting Spokane to obtain funding for the additional water infrastructure needed to help Spokane supplement Airway Heights water needs; and

WHEREAS, Spokane is willing to extend the term of the emergency water service an additional four (4) years, through June 15, 2026, on condition that Airway Heights and Spokane are able to cooperate in good faith in short-term and long-term planning efforts related to the availability and projected need for additional supplemental supply and future supply needs beyond the term of this extension.

NOW, THEREFORE, in consideration of these terms, the parties mutually agree as follows:

1. AGREEMENT DOCUMENTS.

The Agreement, dated April 12, 2018, any previous amendments, addendums and / or extensions / renewals thereto, are incorporated by reference into this document as though written in full and shall remain in full force and effect except as provided herein.

2. EFFECTIVE DATE.

This Extension and 1st Amendment shall become effective immediately upon signature of all Parties.

3. AMENDMENT AND ADDITIONAL TERMS.

Paragraph **5.2.1** of the Agreement shall be replaced and superseded to read as follows:

> **Term**. Unless earlier terminated pursuant to the terms of the Agreement, as amended, Spokane shall supply water in the amount not to exceed 1,400 GPM through the Emergency Supplemental Connection through June 15, 2026. on terms and conditions agreed herein.

Paragraph **5.2.2** of the Agreement shall be replaced and superseded to read as follows:

> This delivery of up to 1,400 GPM through the Emergency Supplemental Connection shall terminate and be discontinued on or before, but no later than June 15, 2026, unless extended by separate written agreement, executed by both Parties as provided in Paragraph 5.2.4.

Paragraph **5.2.3** of the Agreement shall be deleted and superseded as set forth in the Additional Agreed Terms Section B, set forth below.

Paragraph **5.2.4** of the Agreement shall be replaced and superseded to read as follows:

> Notwithstanding the above, any future delivery of water through the Emergency Supplemental Connection beyond the eight (8) years provided for herein will require a separate written agreement, executed by both Parties.

Additional Agreed Terms (Capacity Cooperation Efforts) shall be as follows:

A. Cooperation. To address current and longer-term water supply and service requests, Airway Heights and Spokane agree to and will work together in good faith regarding long-term planning related to Airway Heights' water supply and its requests for increased water supply in both the near and long term. Airway Heights agrees to and will proactively communicate and inform the City of Spokane as to any material changes in their planning related to use of water from Spokane, requested increased or future water demand, or other changes that would impact the use of, amount, and/or delivery of water from Spokane's water system. Spokane agrees to and will proactively communicate and inform Airway Heights as to any material changes in their planning, the status of any capital improvements in the West Plains area, the availability of additional capacity, or other changes that would impact Spokane's ability to deliver water to Airway Heights.

B. Meetings and Status Updates. To facilitate the cooperative efforts between Spokane and Airway Heights and ensure efficient planning, the Parties agree to keep each other reasonably

informed regarding the water system planning material to this Agreement and current and potential future supply and demand from Spokane to Airway Heights, including:

1. Airway Heights and Spokane agree to meet, at least bi-annually, in or around February and August of each calendar year during the term of this extension, or as reasonably soon thereafter as is possible, to discuss planning updates, the status of planned or projected capital improvements, status of water supply needs, and anticipated growth and demand projections, if any. On or about February 1 and August 1 of each calendar year during the term of this extension, Airway Heights agrees to provide Spokane a written status update on its efforts to secure alternative water supply and its projected short-term and long-term supply needs from Spokane, to the extent reasonably feasible.

2. Airway Heights and Spokane engineering and operational staff agree to consult with and keep each other informed regarding planning efforts related to water use, system capacity and functionality, projected demand, and associated capital improvements and to engage in quarterly status communications regarding the same.

3. Upon failure of either Airway Heights or Spokane, without reasonable just cause, to comply with the communication protocols set forth above, either party may provide written notice of such alleged failure, and the Parties, acting by and through their administrator or director level staff, shall meet and confer within thirty (30) days of receipt of such notice. Failure to meaningfully communicate may result in Spokane's inability to supply any additional water to Airway Heights.

4. The Parties further agree to meet and confer to develop a future agreement and/or any amendments to this Agreement at least one year in advance of expiration, or no later than June 15, 2025.

C. Analysis/Modeling. Airway Heights agrees to fund the cost of developing the flow modelling and associated concept designs and cost estimates associated with Spokane's ability to provide continued and increased water supply to Airway Heights consistent with the proposal provided by GHD, Inc. (the "Contractor") described as "Task 6: City of Airway Heights Water Infrastructure Analysis" (the "Analysis/Modeling Study"), a copy of which is attached as Exhibit A. Airway Heights agrees to pay and contribute an amount not to exceed Eighty-Seven Thousand, Eight Hundred and Eighty-Four Dollars and Seventy-Two Cents ($87,884,72) to complete the work identified in Task 6 shown in Exhibit A only as provided herein. Any additional analysis to evaluate Airway Heights' additional requests for water service will be funded by Airway Heights.

1. Spokane agrees to request the Contractor invoice all matters pertaining to the Analysis/Modeling Study separate from other tasks being performed by the Contractor for Spokane. Airway Heights agrees to reimburse Spokane for all invoiced amounts pertaining to the Analysis/Modeling Study within thirty (30) days of forwarded receipt of invoice from GHD, Inc. to Spokane, in an amount not to exceed $87,884.72 in total. Failure to pay may result in Spokane's inability to supply additional water to Airway Heights.
2. Within 30 days of the Effective Date of this Extension and 1st Amendment, Spokane agrees to authorize the commencement of work associated with the above-identified "Task 6" and diligently proceed with the work.
3. Spokane shall provide Airway Heights with copies of all status reports associated with the work upon receipt from the Contractor and shall provide advance notice of and invite Airway Heights to participate in any project meetings with the Contractor pertaining to the work that relates to Airway Heights. Spokane will keep

Airway Heights reasonably informed regarding the status of schedule and completion of the work and anticipated and scheduled deliverables and submittal targets.

4. Spokane shall provide Airway Heights advance notice of and a reasonable opportunity to review and comment on drafts of any reports, memoranda, summaries, evaluations, conclusions, or recommendations, including without limitation the proposed technical memorandum, prior to finalizing. Airway Heights agrees and shall respond and provide any comments within fourteen (14) calendar days. Spokane agrees to consider comments provided by Airway Heights in good faith. Notwithstanding the above, Spokane has complete autonomy over any decisions affecting Spokane's water system.

D. Funding Applications for West Plains Booster Station: To address current and longer-term water supply and service requests, Airway Heights agrees to partner with Spokane on efforts pertaining to the design and construction of the West Plains Booster Station and necessary appurtenances as provided herein.

1. Airway Heights agrees to provide support for Spokane's applications for grant and/or loan funds, including formal letters of support.
2. If successful, the Parties further agree to work together in good faith regarding negotiating commitments and potential contributions of proportional match funding, and/or proportional loan repayment, as needed. Spokane shall meet and confer in good faith with Airway Heights regarding the scope of the Plains Booster Station project. For the avoidance of doubt, nothing in this paragraph requires financial commitment by Airway Heights, which commitment, if necessary, shall be addressed through a separate written agreement between Airway Heights and Spokane. Furthermore, should Airway Heights decide not to participate in the West Plains Booster Station, Spokane has sole discretion regarding the availability of providing long-term or additional water beyond the agreed supplemental amount.
3. In the event obtaining sufficient grant funds are unsuccessful, Airway Heights reserves the right to determine, in its sole discretion, whether to provide proportional amount of funding towards the design and construction of the West Plains Booster Station, understanding that lack of participation may impact Spokane's ability and decision to provide additional water to Airway Heights.

E. Future Funding and Capacity: Based on outcome results of Flow Modeling Study and Funding Applications, the Parties agree to meet and confer in good faith about the evaluation of the modelled impacts, availability of additional and continued supply, proportional costs, potential available future capacity, and rates.

1. **Cost of Service**: Spokane Municipal Code sets the wholesale rates for delivery of water to other purveyors (the "Outside City Rate to Other Purveyors") under SMC 13.04.2014 and further provides that such rate may be modified by separate agreement, in Spokane's sole discretion. The Parties acknowledge that Spokane is currently undergoing a cost-of-service analysis for water service rates. Spokane agrees to review with its rate study consultants information pertaining to overall water service to Airway Heights. This may include any proportionate funding or grant funds as applicable. Spokane agrees to share with Airway Heights the results of the cost-of-service analysis within 60 days of finalization by Spokane.
2. Based on the results of the cost-of-service analysis, and with due consideration given to the factors outlined above and other material issues, the Parties may evaluate the possibility of any amendments to the rates charged by Spokane to Airway Heights in any future amendments or agreements. Notwithstanding the above, rate setting is a legislative function of the Spokane City Council.

All other terms and conditions contained in Paragraph 1 shall remain in full force and effect, excepted as provided herein, by this Amendment.

IN WITNESS WHEREOF, in consideration of the terms, conditions, and covenants contained, or attached and incorporated and made a part hereof, the Parties have executed this Contract Amendment / Extension by having legally binding representatives affix their signatures below.

CITY OF AIRWAY HEIGHTS

By_____
Signature Date

_____
Type or Print Name

_____
Title

Attest:

_____
City Clerk
City of Airway Heights

Approved as to form:

_____
City Attorney
City of Airway Heights

CITY OF SPOKANE

By_____
Signature Date

Nadine Woodard
Type or Print Name

Mayor of the City of Spokane
Title

Attest:

_____
City Clerk
City of Spokane

Approved as to form:

_____
Assistant City Attorney
City of Spokane

Attachments that are part of this Contract Extension:

Exhibit A –GHD Scope of Work Addendum Task 6: City of Airway Heights Water Infrastructure Analysis.

U2022-027f

Agenda Sheet for City Council Meeting of: 10/10/2022		**Date Rec'd**	9/28/2022
		Clerk's File #	OPR 2022-0711
		Renews #	
Submitting Dept	WASTEWATER MANAGEMENT	**Cross Ref #**	
Contact Name/Phone	MIKE CANNON 625-4642	**Project #**	
Contact E-Mail	MCANNON@SPOKANECITY.ORG	**Bid #**	
Agenda Item Type	Contract Item	**Requisition #**	
Agenda Item Name	4320-CONTRACT WITH ALS CANADA LTD FOR SPECIALIZED TESTING OF WASTEWATER		

Agenda Wording

Council approval to award a three year contract with ALS Environmental to provide specialized testing of wastewater and stormwater, at a yearly cost of $73,840 plus applicable taxes. Council Consent Agenda 10/10/22.

Summary (Background)

The City of Spokane, through its Riverside Park Water Reclamation Facility is required to seek analytical services for the High-Resolution Gas Chromatographic/Mass Spectrometric (HRGC/HRMS) analysis of stormwater and wastewater samples. This testing includes monitoring of polychlorinated biphenyls (PCBs), brominated flame retardants, and dioxin. These samples are collected to comply with Department of Ecology required testing of toxic pollutants of concern to the Spokane area.

Lease? NO Grant related? NO Public Works? NO

Fiscal Impact		**Budget Account**
Expense	**$** $73,840	**#** 4320.43260.35148.54950
Expense	**$** $73,840	**#** 4320.43260.35148.54950
Expense	**$** $73,840	**#** 4320.43260.35148.54950
Select	**$**	**#**

Approvals		**Council Notifications**	
Dept Head	GENNETT, RAYLENE	**Study Session\Other**	PIES 9/26/22
Division Director	FEIST, MARLENE	**Council Sponsor**	CM Kinnear
Finance	ALBIN-MOORE, ANGELA	**Distribution List**	
Legal	HARRINGTON, MARGARET	hbarnhart@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	kkeck@spokanecity.org	
Additional Approvals		mhughes@spokanecity.org	
Purchasing		Tax & Licenses	
		rgraybeal@spokanecity.org	
		lmartelle@spokanecity.org	

Committee Agenda Sheet
Public Infrastructure, Environment, and Sustainability

Submitting Department	Public Works & Utilities – Riverside Park Water Reclamation Facility
Contact Name & Phone	Michael Cannon, Plant Manager 625-4642
Contact Email	mcannon@spokanecity.org
Council Sponsor(s)	CM Kinnear
Select Agenda Item Type	■ Consent ☐ Discussion Time Requested: _____
Agenda Item Name	RPWRF - Stormwater Wastewater Analysis
Summary (Background)	The City of Spokane, through its Riverside Park Water Reclamation Facility is required to seek analytical services for the High-Resolution Gas Chromatographic/Mass Spectrometric (HRGC/HRMS) analysis of stormwater and wastewater samples. This testing includes monitoring of polychlorinated biphenyls (PCBs), brominated flame retardants, and dioxin. These samples are collected to comply with Department of Ecology required testing of toxic pollutants of concern to the Spokane area. ALS Environmental was selected from IRFP #4372-17 from four proposals. They are the most favorable to meet the needs of the City and they were ranked the highest with the lowest cost. This award is for a three year contract. The term of the agreement is to begin on October 17, 2022, and shall run through October 18, 2025, with two-one year renewal options. The total contract period is not to exceed five years.
Proposed Council Action & Date:	Council approval to award contract with ALS Environmental to provide specialized testing of wastewater and stormwater, at a yearly cost of $73,840 plus applicable taxes. Council Consent Agenda 10/10/22

Fiscal Impact: Expense
Total Cost: $221,520 ($73,840/year for three years)

Approved in current year budget? ■ Yes ☐ No ☐ N/A

Funding Source ☐ One-time ■ Recurring
Specify funding source:

Expense Occurrence ☐ One-time ■ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts

What impacts would the proposal have on historically excluded communities?

N/A

How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities?

N/A

How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?

N/A

Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others?

ALS Environmental has been selected through the City of Spokane's Purchasing Policy Procedures through IRFP# 4372-17.

City Clerk's No. 2022-0711_____

City of Spokane

PERSONAL SERVICES AGREEMENT

Title: **HRGC/HRMS ANALYSIS OF ENVIRONMENTAL SAMPLES**

This Agreement is made and entered into by and between the **CITY OF SPOKANE** as ("City"), a Washington municipal corporation, and **ALS GROUP USA CORP.,** whose 10450 Stancliff Road, Houston, Texas 77099 as ("Company"), individually hereafter referenced as a "party", and together as the "parties".

The parties agree as follows:

1. PERFORMANCE.
The Company shall perform HRGC/HRMS Analysis of Environmental Samples in accordance with IRFP 5715-22 and Company's Proposal dated August 18, 2022, which is attached as Exhibit B. In the event of a conflict between the Scope of Work and this City Contract, the terms of this contract will control.

2. TERM OF AGREEMENT.
The term of this Agreement begins on October 17, 2022, and shall run through October 18, 2025, unless amended by written agreement or terminated earlier under the provisions. This Contract may be renewed on an annual basis by written agreement of the parties not to exceed 2 (two) additional one year renewals.

3. COMPENSATION / PAYMENT.
Total compensation for Company's services under this Contract shall not exceed **TWO HUNDRED TWENTY-ONE THOUSAND FIVE HUNDRED TWENTY AND NO/100 DOLLARS ($221,520.00)**, excluding tax, if applicable, unless modified by a written amendment to this Agreement. This is the maximum amount to be paid under this Agreement for the work described in Section 3 above, and shall not be exceeded without the prior written authorization of the City in the form of an executed amendment to this Agreement.

The Company shall submit its applications for payment to Riverside Park Water Reclamation Facility, 4401 North Aubrey L. White Parkway, Spokane, Washington 99205-3939. **Payment will be made via direct deposit/ACH** within thirty (30) days after receipt of the Company's application except as provided by state law. If the City objects to all or any portion of the invoice, it shall notify the Company and reserves the right to only pay that portion of the invoice not in dispute. In that event, the parties shall immediately make every effort to settle the disputed amount.

4. TAXES, FEES AND LICENSES.

A. Company shall pay and maintain in current status, all necessary licenses, fees, assessments, permit charges, etc. necessary to conduct the work included under this Agreement. It is the Company's sole responsibility to monitor and determine changes or

the enactment of any subsequent requirements for said fees, assessments, or changes and to immediately comply.

B. The cost of any permits, licenses, fees, etc. arising as a result of the projects included in this Agreement shall be included in the project budgets.

5. CITY OF SPOKANE BUSINESS LICENSE.

Section 8.01.070 of the Spokane Municipal Code states that no person may engage in business with the City without first having obtained a valid annual business registration. The Company shall be responsible for contacting the State of Washington Business License Services at www.dor.wa.gov or 360-705-6741 to obtain a business registration. If the Company does not believe it is required to obtain a business registration, it may contact the City's Taxes and Licenses Division at (509) 625-6070 to request an exemption status determination.

6. SOCIAL EQUITY REQUIREMENTS / NON-DISCRIMINATION.

No individual shall be excluded from participation in, denied the benefit of, subjected to discrimination under, or denied employment in the administration of or in connection with this Agreement because of age, sex, race, color, religion, creed, marital status, familial status, sexual orientation including gender expression or gender identity, national origin, honorably discharged veteran or military status, the presence of any sensory, mental or physical disability, or use of a service animal by a person with disabilities. The Company agrees to comply with, and to require that all subcontractors comply with, federal, state and local nondiscrimination laws, including but not limited to: the Civil Rights Act of 1964, the Rehabilitation Act of 1973, the Age Discrimination in Employment Act, and the American's With Disabilities Act, to the extent those laws are applicable.

7. INDEMNIFICATION/LIMIT OF COMPANY'S LIABILITY.

The Company shall defend, indemnify, and hold the City and its officers and employees harmless from all claims, demands, or suits at law or equity asserted by third parties for bodily injury (including death) and/or property damage which arise from the Company's negligence or willful misconduct under this Agreement, including attorneys' fees and litigation costs; provided that nothing herein shall require a Company to indemnify the City against and hold harmless the City from claims, demands or suits based solely upon the negligence of the City, its agents, officers, and employees. If a claim or suit is caused by or results from the concurrent negligence of the Company's agents or employees and the City, its agents, officers and employees, this indemnity provision shall be valid and enforceable to the extent of the negligence of the Company, its agents or employees. The Company specifically assumes liability and agrees to defend, indemnify, and hold the City harmless for actions brought by the Company's own employees against the City and, solely for the purpose of this indemnification and defense, the Company specifically waives any immunity under the Washington State industrial insurance law, or Title 51 RCW. The Company recognizes that this waiver was specifically entered into pursuant to the provisions of RCW 4.24.115 and was the subject of mutual negotiation. The indemnity and agreement to defend and hold the City harmless provided for in this section shall survive any termination or expiration of this agreement.

7.1 Nothing in this agreement limits or excludes the Company's liability:

(i) for death or personal injury caused by its negligence or willful misconduct or that of its employees, agents or subcontractors as applicable;

(ii) for fraud or fraudulent misrepresentation by it or its employees, agents or subcontractors as applicable; or

(iii) where liability cannot be limited or excluded by Applicable Laws.

7.2 The Company's aggregate liability in respect of claims based on events arising out of or in connection with this agreement or any collateral contract (excluding loss or damage to real or personal property), whether in contract or tort (including negligence) or otherwise, will in no circumstances exceed an amount equal to five (5) x the total fees payable by the City to the Company under this Agreement or $250,000 (whichever is greater).

7.3 The Company's aggregate liability to the City for any loss or damage to real or personal property whatsoever which arises under or in connection with this agreement or any collateral contract, and whether by way of an indemnity or statute, in tort (for negligence or otherwise), or on any other basis in law or equity, is limited to $5,000,000 in aggregate.

8. INSURANCE.

During the period of the Agreement, the Company shall maintain in force at its own expense, each insurance noted below with companies or through sources approved by the State Insurance Commissioner pursuant to Title 48 RCW:

A. **Worker's Compensation Insurance** in compliance with RCW 51.12.020, which requires subject employers to provide workers' compensation coverage for all their subject workers and Employer's Liability Insurance in the amount of $1,000,000;

B. **General Liability Insurance** on an occurrence basis, with a combined single limit of not less than $1,000,000 each occurrence for bodily injury and property damage. It shall include contractual liability coverage for the indemnity provided under this Agreement. It shall provide that the City, its officers and employees are additional insureds but only with respect to the Company's services to be provided under this Agreement;

i. Acceptable **supplementary Umbrella insurance** coverage combined with Company's General Liability insurance policy must be a minimum of $1,000,000, in order to meet the insurance coverage limits required in this Agreement; and

C. **Automobile Liability Insurance** with a combined single limit, or the equivalent of not less than $1,000,000 each accident for bodily injury and property damage, including coverage for owned, hired and non-owned vehicles.

There shall be no cancellation, material change, reduction of limits or intent not to renew the insurance coverage(s) without thirty (30) days written notice from the Company or its insurer(s) to the City. As evidence of the insurance coverage(s) required by this Agreement, the Company shall furnish acceptable Certificates of Insurance (COI) to the City at the time it returns this signed Agreement. The certificate shall specify the City of Spokane as "Additional Insured" specifically for Company's services under this Agreement, as well as all of the parties who are additional insureds,. The Company shall be financially responsible for all pertinent deductibles, self-insured retentions, and/or self-insurance.

9. DEBARMENT AND SUSPENSION.

The Company has provided its certification that it is in compliance with and shall not contract with individuals or organizations which are debarred, suspended, or otherwise excluded from or ineligible from participation in Federal Assistance Programs under Executive Order 12549 and "Debarment and Suspension", codified at 29 CFR part 98.

10. AUDIT.
The Company and its sub-contractor shall maintain for a minimum of three (3) years following final payment all records related to its performance of the Agreement. The Company and its sub-contractors shall provide access to authorized City representatives, at reasonable times and in a reasonable manner to inspect and copy any such record. In the event of conflict between this provision and related auditing provisions required under federal law applicable to the Agreement, the federal law shall prevail.

11. ASSIGNMENT AND SUBCONTRACTING.
The Company shall not assign or subcontract its obligations under this Agreement without the City's written consent, which may be granted or withheld in the City's sole discretion. Any subcontract made by the Company shall incorporate by reference this Agreement, except as otherwise provided. The Company shall ensure that all subcontractors comply with the obligations and requirements of the subcontract. The City's consent to any assignment or subcontract does not release the Company from liability or any obligation within this Agreement, whether before or after City consent, assignment or subcontract.

12. TERMINATION.
Either party may terminate this Agreement, with or without cause, by ten (10) days written notice to the other party. In the event of such termination, the City shall pay the Company for all work previously authorized and performed prior to the termination date.

13. STANDARD OF PERFORMANCE.
The standard of performance applicable to Company's services will be the degree of skill and diligence normally employed by professional Company performing the same or similar services at the time the services under this Agreement are performed.

14. OWNERSHIP AND USE OF RECORDS AND DOCUMENTS.
Original documents, drawings, designs, reports, or any other records developed or created under this Agreement shall belong to and become the property of the City. All records submitted by the City to the Company shall be safeguarded by the Company. The Company shall make such data, documents and files available to the City upon the City's request. If the City's use of the Company's records or data is not related to this project, it shall be without liability or legal exposure to the Company.

Under Washington State Law (reference RCW Chapter 42.56, the *Public Records Act* [PRA]) all materials received or created by the City of Spokane, including this contract and attachments, are ***public records*** and are available to the public for viewing via the City Clerk's Records (online) or a valid Public Records Request (PRR).

Notwithstanding anything to the contrary, City will maintain the confidentiality of Company's materials and information only to the extent that is legally allowed in the State of Washington. City is bound by the State Public Records Act, RCW Ch. 42.56. That law presumptively makes all records in the possession of the City public records which are freely available upon request by anyone. In the event that City gets a valid public records request for Company's materials or information and the City determines there are exemptions only the Company can assert, City will endeavor to give Company notice. Company will be required to go to Court to get an injunction preventing the release of the requested records. In the event that Company does not get a timely injunction preventing the release of the records, the City will comply with the Public Records Act

and release the records.

15. ANTI KICK-BACK.

No officer or employee of the City of Spokane, having the power or duty to perform an official act or action related to this Agreement shall have or acquire any interest in the Agreement, or have solicited, accepted or granted a present or future gift, favor, service or other thing of value from or to any person involved in this Agreement.

16. MISCELLANEOUS PROVISIONS.

A. **Amendments/Modifications**: This Agreement may be modified by the City in writing when necessary, and no modification or Amendment of this Agreement shall be effective unless signed by an authorized representative of each of the parties hereto.

B. The Company, at no expense to the City, shall comply with all laws of the United States and Washington, the Charter and ordinances of the City of Spokane; and rules, regulations, orders and directives of their administrative agencies and officers. Without limiting the generality of this paragraph, the Company shall comply with the requirements of this Section.

C. This Agreement shall be construed and interpreted under the laws of Washington. The venue of any action brought shall be in a court of competent jurisdiction, located in Spokane County, Washington.

D. **Captions**: The titles of sections or subsections are for convenience only and do not define or limit the contents.

E. **Severability**: If any term or provision is determined by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Agreement shall not be affected, and each term and provision shall be valid and enforceable to the fullest extent permitted by law.

F. **Waiver**: No covenant, term or condition or the breach shall be deemed waived, except by written consent of the party against whom the waiver is claimed, and any waiver of the breach of any covenant, term or condition shall not be deemed a waiver of any preceding or succeeding breach of the same or any other covenant, term of condition. Neither the acceptance by the City of any performance by the Company after the time the same shall have become due nor payment to the Company for any portion of the Work shall constitute a waiver by the City of the breach or default of any covenant, term or condition unless otherwise expressly agreed to by the City in writing.

G. **Entire Agreement**: This document along with any exhibits and all attachments, and subsequently issued addenda, comprises the entire agreement between the City and the Company. If conflict occurs between Agreement documents and applicable laws, codes, ordinances or regulations, the most stringent or legally binding requirement shall govern and be considered a part of this Agreement to afford the City the maximum benefits.

H. **No personal liability**: No officer, agent or authorized employee of the City shall be personally responsible for any liability arising under this Agreement, whether expressed or implied, nor for any statement or representation made or in any connection with this Agreement.

IN WITNESS WHEREOF, in consideration of the terms, conditions and covenants contained, or attached and incorporated and made a part, the parties have executed this Agreement by having legally-binding representatives affix their signatures below.

ALS GROUP USA CORP.,	**CITY OF SPOKANE**
By_____	By_____
Signature Date	Signature Date
_____	_____
Type or Print Name	Type or Print Name
_____	_____
Title	Title
Attest:	Approved as to form:
_____	_____
City Clerk	Assistant City Attorney

Attachments that are part of this Agreement:
Exhibit A – Certificate Regarding Debarment
Exhibit B – Company's Proposal dated August 18, 2022
22-160a-

EXHIBIT A

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. The undersigned (i.e., signatory for the Subrecipient / Contractor / Consultant) certifies, to the best of its knowledge and belief, that it and its principals:

   a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
   b. Have not within a three-year period preceding this contract been convicted or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice;
   c. Are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and,
   d. Have not within a three-year period preceding this contract had one or more public transactions (federal, state, or local) terminated for cause or default.

2. The undersigned agrees by signing this contract that it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction.

3. The undersigned further agrees by signing this contract that it will include the following clause, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions:

   Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions

   1. The lower tier contractor certified, by signing this contract that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

   2. Where the lower tier contractor is unable to certify to any of the statements in this contract, such contractor shall attach an explanation to this contract.

4. I understand that a false statement of this certification may be grounds for termination of the contract.

Name of Subrecipient / Contractor / Consultant (Type or Print)	Program Title (Type or Print)
Name of Certifying Official (Type or Print) Title of Certifying Official (Type or Print)	Signature Date (Type or Print)

EXHIBIT B

DISTRIUBTION LIST: IRFP 5715-22, HRGC/HRMS ANALYSIS OF ENVIRONMENTAL SAMPLES Professional Testing Services

Public Agency Name:	City of Spokane
Roster Type:	Vendor Roster
Date:	08/04/2022
Time:	09:38 am
Main-Category:	General Services
Sub-Category:	Analytical Laboratory Services, Medical, Scientific, Lab Services

DANTSI05@YAHOO.COM; finance@readyrebound.com; jonathan.sheckard@rivercityusa.com; ken@measuretechinc.com; kottmar@graymarenv.com; mick.wheeler@rivercityusa.com; ryan@nwffenviro.com; sales@fuelcareusa.com; sales@peakmeasure.com; sealance2449@gmail.com; tsharpee@readyrebound.com

Public Agency Name:	City of Spokane
Roster Type:	Consultant Roster
Date:	08/04/2022
Time:	09:47 am
Main-Category:	Environmental Consulting
Sub-Category:	Water Quality and Biological Indicator Analysis

abbey@evergreenstormh2o.com; acavender@wilsonengineering.com; achae@mackaysposito.com; achilds@swca.com; adam.tycaster@geosyntec.com; aimee@evergreenstormh2o.com; alana.bowman@terracon.com; alaw@wilsonengineering.com; alisa.parks@stantec.com; Allison@esvelt.com; Allison@peaksustainability.com; amanda.behner@aecom.com; amiller@nhcweb.com; amorrow@psesurvey.com; amurray@budingerinc.com; amy.fattore@tetratech.com; annika@fainenv.com; arocha@geoengineers.com; asmith@geoengineers.com; aspooner@anchorqea.com; banderson@geosyntec.com; bbailey@skillings.com; bblyton@aesgeo.com; bcmarketingseattle@brwncald.com; bids@peninsulaeg.com; bids@spokaneenvironmental.com; BioterraEngineering@gmail.com; bkalisch@geoengineers.com; bkellems@integral-corp.com; bmann@watershedco.com; bmiller@edgeanalytical.com; bmmay@burnsmcd.com; brad@alleci.com; brian.peters@ghd.com; brian@cascadiaconsulting.com; britt.crea@alta-se.com; btaylor@raedeke.com; bwhite@to-engineers.com; casey.curran@intertek.com; cfisher@48northsolutions.com; Chad.Schuster@jacobs.com; chaddurand@clearwayenv.com; charis@talithaconsults.com; cheryl.jemar@stantec.com; chris@cohowr.com; christine.diel@ghd.com; CNilsen@geosyntec.com; connie.clifford@coffman.com; courtney.hough@otak.com; cpotter@robinson-noble.com; cpotter@robinson-noble.com; Crystal.Sackman@jacobs.com; cwright@raedeke.com; dailysolicitations@mackaysposito.com; dan.trisler@hartcrowser.com; daniella@dcgengr.com; dave.segal@pbsusa.com; davehill@dhenviro.com; David@peaksustainability.com; deborah.bartley@icf.com; derica.escamilla@terracon.com; dianel@sittshill.com; djpleskac@burnsmcd.com; dmurata@dowl.com; dnazy@eaest.com; Dominic.Sinacola@ghd.com; dparkinson@geosyntec.com; dpolley@g-o.com; drice@anchorqea.com; drivera@parametrix.com;

dustin.cooley@pbsusa.com; EASeattle@eaest.com; edkunz@terracon.com; efithen@to-engineers.com; eguyer@integral-corp.com; ehowe@rh2.com; emily.tait@intertek.com; EPCRM@icf.com; erik@dcgengr.com; erika.britney@icf.com; erinm@paceengrs.com; EvanRamos@kennedyjenks.com; felixk@windwardenv.com; Francesca@evergreenstormh2o.com; gbrunner@eaest.com; gdv@deainc.com; gsalyer@aspeneg.com; harriet.duron@pbsusa.com; heather.goudie@pbsusa.com; heidi.wing@intertek.com; heidi.woolfolk@aecom.com; hpage@anchorqea.com; info@daramola-inc.com; info@fourpeaksenv.com; info@msaenvironmental.com; info@palouseenvironmentals.org; info@psesurvey.com; inger.jackson@mottmac.com; istupakoff@tomboenvironmental.com; Janna.Stacey@jacobs.com; jason.mattox@pbsusa.com; jbecker@robinson-noble.com; jcowger@varela-engr.com; jcowger@varela-engr.com; jean.toler@mottmac.com; jeff.gaarder@ghd.com; jeff@canyonenv.org; jeff@turnstoneenvironmental.com; jgillaspy@elementsolutions.org; jhay@robinson-noble.com; Jill@msaenvironmental.com; jkemp@encoec.com; jkemp@encoec.com; jnakayama@newfields.com; jnorman@heg-inc.com; jnorvell@to-engineers.com; john.manix@pbsusa.com; john.rogers@coffman.com; johnt@windwardenv.com; jon.davies@bhcconsultants.com; jon.munkers@alta-se.com; jordan@dcgengr.com; jordancw@widener-enviro.com; jpatterson@herrerainc.com; judith.perez@pbsusa.com; kadole@burnsmcd.com; kaela@evergreenstormh2o.com; kate.molleson@perteet.com; kathyg@windwardenv.com; kelsey@moreredds.com; kennedy.myers@pbsusa.com; kirk.holmes@perteet.com; Kjell.Stendal@jacobs.com; klange@swca.com; kristen.legg@floydsnider.com; Lbehm@landauinc.com; leslie.hebert@coffman.com; Lindsey.gregory@wsp.com; ljh@edgdeanalytical.com; lori.castro@perteet.com; lparisi@gsiws.com; lturner@anchorqea.com; lucy.campos@pbsusa.com; lucy.campos@pbsusa.com; marc.sauze@stantec.com; maridee.hopkins@bhcconsultants.com; Mark.Anderson2@jacobs.com; mark.longtine@wsp.com; marketing.bids@pbsusa.com; marketing@aspectconsulting.com; marketing@dowl.com; marketing@paceengrs.com; marketing@sittshill.com; marketing@soundearthinc.com; marketingtoolbox@parametrix.com; matthew.davis@ghd.com; mbuttin@herrerainc.com; mclancy@esassoc.com; melissa.mccarty@coffman.com; mgillis@welchcomer.com; mgreen@aesgeo.com; mike.ehlebracht@hartcrowser.com; MT.Marketing@kimley-horn.com; nancyy@ehsintl.com; nwmarketers@esassoc.com; Paul@SaturnaH2O.org; peter.deboldt@perteet.com; pgg_contact@plateaugeoscience.com; pkeller@dowl.com; price@dowl.com; procurement@maulfoster.com; procurement@maulfoster.com; proposals@cascadiaconsulting.com; pskillings@skillings.com; quin@dcgengr.com; Rannear@Geosyntec.com; rfp@econw.com; rfp@gsiws.com; richard.talley@stantec.com; rlashbrook@to-engineers.com; rmathews@efulcrum.net; Rosanna.Hardesty@swca.com; rpowell@robinson-noble.com; rschipanski@eaest.com; rtnye@burnsmcd.com; rtuomisto@aesgeo.com; russell.connole@stantec.com; rwlundquist@raedeke.com; ryan@nwffenviro.com; sales@osbornconsulting.com; sarrigoni@geoengineers.com; sbraicks@geoengineers.com; sbrowning@integral-corp.com; sburchett@budingerinc.com; sealance2449@gmail.com; seattlemarketing@wsp.com; sfredericksen@xltech.com; sherry@cohowr.com; sknox@anchorqea.com; sleigh@parametrix.com; soq@rh2.com; sotto@maulfoster.com; staylor@maulfoster.com; Stephen.Swope@mottmac.com; stephen@alleci.com; susan.kemp@hartcrowser.com; susanm@windwardenv.com; suzanner@windwardenv.com; svanderyacht@elementsolutions.org; svanderyacht@psesurvey.com; swoerman@landauinc.com; tarelle@osbornconsulting.com; taylor@evergreenstormh2o.com; tblack@budingerinc.com; tiffanyc@sittshill.com; tkelley@obec.com; tmccormack@eaest.com; tom.archer@pbsusa.com; tom@turnstoneenvironmental.com; tracy.chambers@perteet.com; tskillings@skillings.com; tturner@varela-engr.com; vbarthels@to-engineers.com; vern.hebert@stantec.com; wall_k@econw.com; wamktg@hdrinc.com; wc@welchcomer.com; wguyton@aspectconsulting.com; wvaldez@aspectconsulting.com; yessica.pote@aecom.com

DISTRIBUTION LIST

BID NUMBER:
BID TITLE: HRGC/HRMS ANALYSIS OF ENVIRONMENTAL SAMPLES
DUE DATE:

CITY OF SPOKANE - PURCHASING
808 W. Spokane Falls Blvd.
Spokane, Washington 99201-3316
(509) 625-6400
FAX (509) 625-6413

COMPANY NAME	CONTACT	ADDRESS	CITY	STATE	PHONE	EMAIL ADDRESS
Eurofins - TestAmerica Spokane	Randee Arrington	11922 E 1st	Spokane Valley	WA	(509) 924-9200	Randee.Arrington@et.eurofinsus.com
Vista Analytical Laboratory, Inc	Jennifer Miller	1104 Windfield Way	El Dorado Hills	CA	(916) 673-1520	mmaier@vista-analytical.com; jmiller@vista-analytical.com
Pace Analytical Services, Inc.	Adam Krieger	1700 Elm Street SE, S	Minneapolis	MN	913-563-1436	Adam.Krieger@pacelabs.com; nathan.eklund@pacelabs.com; dennis.leeke@pacelabs.com; Jerry.Thao@pacelabs.com
SGS AXYS Analytical	Rhonda Stoddard	2045 Mills Rd W	Sidney	BC	(250) 655-5800	askaxys@axysanalytical.com; scampbell@axys.com; rgrace@axys.com;Rhonda.stoddard@sgs.com
Pacific Rim Labs	David Hope	#103, 19575 - 55A Av	Surrey	BC	(604) 532-8711	dave@pacificrimlabs.com; maryanne@pacificrimlabs.com
Ceres Analytical Laboratory, Inc	James Hedin	4919 Windplay Dr, Ste	El Dorado Hills	CA	(916) 932-5011	jhedin@ceres-lab.com
Eurofins Lancaster Laboratories	Dorothy Love	2425 New Holland Pik	Lancaster	PA	(717) 556-7327	LancLabsEnv@EurofinsUS.com
Frontier Analytical Laboratory	Dan Vickers	5172 Hillsdale Circle	El Dorado Hills	CA	916-934-0900	info@frontieranalytical.com; brads@frontieranalytical.com; danv@frontieranalytical.com
SGS North America Inc.	Jeannie Milholland	5500 Business Dr	Wilmington	NC	(910) 350-1903	amy.boehm@SGS.com
TestAmerica Laboratories, Inc. -	Kevin McGee	5815 Middlebrook Pike	Knoxville	TN	(865) 291-3000	info@testamericainc.com
ALS Environmental - Burlington	Ron McLeod	1435 Norjohn Court, U	Burlington	ON	(905) 331-3111	Ron.mcleod@alsglobal.com; claire.kocharakkal@alsglobal.com; ancy.sebastian@alsglobal.com
Cape Fear Analytical, LLC	Walter Larkins	3306 Kitty Hawk Rd, S	Wilmington	NC	910-795-0421	info@cfanalytical.com
Analytical Resources, Incorporated	Dave Mitchell	4611 South 134th Plac	Tukwila	WA	206-695-6205	info@arilabs.com

Randee.Arrington@et.eurofinsus.com; mmaier@vista-analytical.com; jmiller@vista-analytical.com; Adam.Krieger@pacelabs.com; nathan.eklund@pacelabs.com; dennis.leeke@pacelabs.com; Jerry.Thao@pacelabs.com; askaxys@axysanalytical.com; scampbell@axys.com; rgrace@axys.com;Rhonda.stoddard@sgs.com; dave@pacificrimlabs.com; maryanne@pacificrimlabs.com; jhedin@ceres-lab.com; LancLabsEnv@EurofinsUS.com; info@frontieranalytical.com; brads@frontieranalytical.com; danv@frontieranalytical.com; amy.boehm@SGS.com; info@testamericainc.com; Ron.mcleod@alsglobal.com; claire.kocharakkal@alsglobal.com; ancy.sebastian@alsglobal.com; info@cfanalytical.com; info@arilabs.com;

CITY: purchasinghelp@spokanecity.org; rrinderle@spokanecity.org; jdonovan@spokanecity.org; hbarthart@spokanecity.org; jeckhart@spokanecity.org; karrington@spokanecity.org;

August 25, 2022

Rick Rinderle
City of Spokane
Purchasing

RE: Recommendation for Award of Contract for RFP #5715-22
HRGC/HRMS Analysis of Environmental Samples

Dear Mr. Rinderle:

A review committee consisting of myself (Jeff Donovan), Kyle Arrington, and Jon Eckhart convened to review and recommend proposals submitted in response to RFP #5715-22. Of the four proposals submitted, ALS Environmental has been selected as the most favorable to meet the needs of the City for this work. The selection method used for determining the recommendation was by the consensus of the majority on the review committee. Through using the scoring criteria outlined in the RFP, and after a thorough discussion and reevaluation, the three committee members ranked ALS the highest overall. Based on the maximum estimated samples, ALS had the lowest cost proposal. The estimated cost for a 3-year contracting term will be $221,520 ($73,840/year). Testing completed under this contract would all take place at their Burlington, Ontario, Canada facility. The ALS Burlington Lab specializes in the analyses being requested and has the experience, expertise and resources necessary to meet the needs of the City for this contract. ALS has conducted this testing for the City from 2017 to 2022.

If there is any additional information needed about how the selection process was conducted, please don't hesitate to contact me.

Sincerely,

Jeff Donovan
Environmental Analyst, RPWRF Laboratory

cc: Raylene Gennett, Director, Wastewater Management
Mike Cannon, Plant Manager, RPWRF
Jon Eckhart, Laboratory Supervisor, RPWRF Laboratory
Kyle Arrington, Chemist, RPWRF Laboratory
Heather Barnhart, Facility Inventory Foreperson, RPWRF
Thea Prince, Senior Procurement Specialist, Purchasing

ALS Group USA Corp
10450 Stancliff Rd
Houston TX 77099,
T: +1 281 530-5656
www.alsglobal.com

right solutions.
right partner.

Attention: Purchasing
City of Spokane - Purchasing
4TH Floor, City Hall
808 W. Spokane Falls Blvd.
Spokane WA 99201-3316

August 18th, 2022

re RFP#: 5715-22

Dear Sir/Madam,

This Letter of Submittal and companying proposal are in response to the RFP#: 4372-17 Titled "HRGC/HRMS ANALYSIS OF ENVIRONMENTAL SAMPLES".

ALS Group USA, Corp and ALS Canada Ltd are affiliates of a common parent ALS Limited, an Australian publically traded corporation. Analysis will be contracted through ALS Group USA Corp (HQ: 105450 Stancliff Rd of Houston TX). Analysis for this proposal will be performed as a subcontract of ALS Group USA Corp entirely to ALS Canada Ltd (dba ALS Environmental and ALS Life Sciences) at the ALS Burlington Life Science facility at 1435 Norjohn Court in Burlington, Ontario Canada L7L0E6 (Contact: Ron McLeod; Phone 905-331-3111, Fax 905-331-4567 and email ron.mcleod@alsglobal.com). There are no former City of Spokane employees employed by the ALS Canada Ltd nor the ALS Group USA, Corp governing boards as of the date of the proposal or during the previous twelve months. Unless agreed upon by the City of Spokane, ALS Canada Ltd and ALS Group USA Corp will comply with all of the terms and conditions set forth in the Request for Proposal.

Uploaded for the ALS submittal include the four requested elements (Letter of Submittal, Technical Proposal, Management Proposal & Cost Proposal).

ALS is pleased to provide this offer and looks forward to the evaluation and responses.

Sincerely,

_____
Paul Loewy
General Manager, Environmental USA
Paul.loewy@alsglobal.com

MANGEMENT PROPOSAL

IN RESPONSE TO: CITY OF SPOKANE RFP# 5715-22

TITLED: “HRGC/HRMS ANALYSIS OF ENVIRONMENTAL SAMPLES PROFESSIONAL TESTING SERVICES”

DUE DATE: AUGUST 19TH, 2022, 9:00AM PACIFIC

SUBMITTED TO:

ATTN: CITY OF SPOKANE - PURCHASING

4TH FLOOR, CITY HALL

808 W. SPOKANE FALLS BLVD.

SPOKANE WA 99201-3316

PRESENTED BY: ALS GROUP USA CORP, 10450 STANCLIFF RD HOUSTON TX 77099

LAB LOCATION: 1435 NORJOHN COURT, BURLINGTON, ONTARIO, CANADA L7L 0E6

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Introduction

ALS Canada Ltd and ALS Group USA, Corp are pleased to provide this proposal to the City of Spokane for RFP# 4372-17, 'HRGC/HRMS ANALYSIS OF ENVIRONMENTAL SAMPLES'.

ALS Canada Ltd and ALS Group USA, Corp are the legal name of entities with the common parent of ALS Limited, an Australian publically traded company. ALS environmental laboratories around the world operate under the trade names ALS Life Sciences and ALS Environmental. ALS Limited is one of the largest, most geographically diverse, testing companies in the world staffed by over 11,000 persons operating from 370 sites in 65 countries across Africa, Asia, Australia, Europe and the Americas.

ALS under ALS Group USA, Corp holds a Washington State business license (UBI# 602998939) laboratories in Kelso WA and in Everett WA. The ALS Canada Ltd environmental laboratory facility in Burlington, Ontario Canada will be providing all of the analytical services if awarded the contract since this ALS facility specializes in the analyses of US EPA methods via GC/HRMS required for this contract.

ALS Group USA Corp is bidding on this contract with ALS Canada Ltd being to sole and total subcontractor for all analytical services.

The proposal herein is valid for any defined and valid timeline requirement for the RFP or for 60 days following the closing date of the bid solicitation whichever is longer.
The proposal is comprised of the following:

- electronic files including the following parts:

a) Letter of Submittal
    a. Including 3 Attachments
b) Technical Proposal
    a. Including 9 Attachments, 5 of which are "Proprietary Information" submitted separately
c) Management Proposal
d) Cost Proposal

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1. PROJECT MANAGEMENT

[The proposal includes responses to all solicitation listed items (reproduced below) in sequence in the sub-sections that follows. The solicitation requests have been reproduced in blue type of the corresponding Section for ease of reference for the reader. ALS responses are in black type.]

1. PROJECT TEAM STRUCTURE / INTERNAL CONTROLS - Provide a description of the proposed project team structure and internal controls to be used during the course of the project, including any subcontractors. Provide an organizational chart of the Firm indicating lines of authority for personnel involved in performance of this potential contract and relationships of this staff to other programs or functions of the Firm. This chart must also show lines of authority to the next senior level of management. Include who within the Firm will have prime responsibility and final authority for the proposed work.

2. STAFF QUALIFICATIONS / EXPERIENCE – Identify staff, including subcontractors, who will be assigned to the potential contract, indicating the responsibilities and qualifications of such personnel, and include the amount of time each will be assigned to the project. Provide resumes' (not to exceed two (2) pages per person) for the named staff, which include information on the individual's particular skills related to this project, education, experience, significant accomplishments and any other pertinent information. The Firm shall commit that staff identified in its Proposal will actually perform the assigned work. Any staff substitution must have the prior approval of the City.

1.1 PROJECT TEAM STRUCTURE / INTERNAL CONTROLS

All analyses will be performed at the ALS Canada facility in Burlington ON Canada. An organizational charts for ALS Burlington is are provided in Attachment M1. The final report authority for this contract lies with Dr Ron McLeod, the ALS Burlington Technical Director.

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In ALS Canada, the local Quality Management staff report independently from operations through to National Quality Manager, David Gurdibaniuk. David resides in the ALS Winnipeg MB office and in turn he reports to the corporate Technical Director Mark Hugdahl in ALS Burnaby BC. This reporting line helps to ensure a consistent nation quality program that is independent of day to day operations.

Operationally within ALS Burlington and after preparation of the initial reports (primary review), there are a minimum of three levels of additional data review:

a) Primary: Analyst's review during data assessment and report preparation
b) Secondary: Instrumental peer analyst's secondary review
c) Tertiary: Senior analyst's review
d) Quaternary: Project Management review

With rare exceptions for HRMS operations, the Senior Analyst's review is limited to four extremely experienced staff members, Brad Reimer, Sabrina Jin, Steve Kennedy or Dr. Ron McLeod. **[Exceptions using other analysts are allowed for final review only in the absence of one of these four senior staff.]** Resumes of these key persons are presented in Section 1.2 below. Dr. Ron McLeod is the ALS Burlington Technical Director and provides overall oversite to the technical reviews of the data.

1.2 STAFF QUALIFICATIONS / EXPERIENCE

A copy of the ALS Burlington's Statement of Qualifications is presented in Attachment M2. A listing of key staffing along with references to direct experience in the ten List A and B relevant major projects are presented in the Table below. **[The ten referenced projects A1 through A5 (Sediments) and B1 through B5 (Waters) are summarized in the tables that follow below).]** Resumes of these staff are presented in Attachment M3.

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ALS BURLINGTON KEY STAFF & PROJECT EXPERIENCE			Project ID									
			C1	C2	C3	C4	C5	D1	D2	D3	D4	D5
Key Staff Members	**Contract Position**	**Years of Lab Experience**	Wood	AECOM	Golder	Foth	Jacobs	Gilbane	Terratherm	Spokane	Metro Van	Triton
Ron McLeod	Business Dev. & Tech. Director	36	X	X	X	X	X	X	X	X	X	X
Stephen Kennedy	Technical Manager	32	X	X	X	X	X	X	X	X	X	X
Cameron McIntosh	Quality Systems Coord.(Local)	8.1	X	X	X	X	X	X	X	X	X	X
Minoo SharifiFar	Site Safety and Quality Admin.	4.1			X	X	X				X	
Brad Reimer	HRMS Instrument & Methods Spec	35	X	X	X	X	X	X	X	X	X	X
Mark McHugh	Supervisor Organic Prep	12	X	X	X	X	X	X	X	X	X	X
Ella Gdyczynski	Senior Analyst	39	X	X	X	X	X	X	X	X	X	X
Todd Patterson	GC/HRMS Operator	12	X		X	X	X		X	X	X	X
Edwin Sabjic	GC/HRMS Operator	9.4	X	X	X	X	X	X	X	X	X	X
Nilmini Vithanage	GC/MSMS & GC/HRMS Oper.	11			X	X	X			X	X	X
Katherine Berg	GC/HRMS Operations Sup.	6.1			X	X	X			X	X	X
Sabrina Jin	Data Integrity Specialist	30	X	X	X	X	X	X	X	X	X	X
Abraham Kuol	GC/MSMS Operator	6.0			X	X	X			X	X	
Aaron Burton	Sample Receiving/Custodian	9.3	X	X	X	X	X	X	X	X	X	X
Claire Kocharakkal	Client Service Rep	4.4	X	X	X	X	X		X	X	X	X
Breanne Dusureault	Client Service Rep	3.7	X		X	X	X		X	X	X	X
Lynne Wrona	Client Service Rep	13	X	X	X	X	X	X	X	X	X	X

X = Participation and experience in the listed project

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Table 1A: Major Sediments Contracts

A1	**Contracting Organization**	Wood PLC	
	Contract ID	English/Wabigoon Rivers	
	Contract Term		
		Fall 2018 - 2021	
	Project	Sediment, Water, Tissues	
	Analyses	PCBs (HRMS), PCDD/F(HRMS)	
	Scope	> 200 samples (sediment, tissues, waters)	
	Contacts	Denise King, Senior Environmental Chemist	Elizabeth Penta, Environmental Chemist
		WOOD PLC	WOOD PLC
		New Hampshire, USA	New Hampshire, USA
		+1 978-392-5339 (direct)	+1 978-392-5366
		denise.king@woodplc.com	elizabeth.penta@woodplc.com
A2	**Contracting Organization**	AECOM	
	Contract ID	#60566335	
	Contract Term	July 2018 to Oct 2018	
	Project	Portland Harbor Superfund Site	
	Analyses	OC Pesticides via EPA Method 1699 (GC/HRMS)	
	Scope	449 Sediments	
	Contacts	Karen Mixon	
		Senior Chemist/Project Manager	
		1111 Third Avenue, Suite 1600	
		Seattle, WA 98101	
		206-438-2234	
A3	**Contracting Organization**	Golder & Associates	
	Contract ID	Portland Harbor Superfund Site	
	Contract Term	Summer 2021 to Winter 2022	
	Project	Charaterization of Sediments	
	Analyses	PCDD/F (1613B), PCB (1668C) & OCP (1699)	
	Scope	295 Sediments	
	Contacts	Sub-Contract thru ALS Group USA Corp - ALS Kelso location	
		Karen Melerine	
		ALS Kelso WA 98626	
		1317 South 13th Avenue	
		(360) 577-7222	

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A4	**Contracting Organization**	Foth	
	Contract ID	Portland Harbor Superfund Site	
	Contract Term	Summer 2021 to Winter 2022	
	Project	Charaterization of Sediments	
	Analyses	PCDD/F (1613B), PCB (1668C) & OCP (1699)	
	Scope	678 Sediments	
	Contacts	Sub-Contract thru ALS Group USA Corp - ALS Kelso location	
		Karen Melerine	
		ALS Kelso WA 98626	
		1317 South 13th Avenue	
A5	**Contracting Organization**	Jacobs	
	Contract ID	Portland Harbor Superfund Site	
	Contract Term	Summer 2021 to Winter 2022	
	Project	Charaterization of Sediments	
	Analyses	PCDD/F (1613B), PCB (1668C) & OCP (1699)	
	Scope	1010 Sediments	
	Contacts	Sub-Contract thru ALS Group USA Corp - ALS Kelso location	
		Karen Melerine	
		ALS Kelso WA 98626	
		1317 South 13th Avenue	
		(360) 577-7222	

Table 1B: Major Water Contracts

B1	**Contracting Organization**	ITSI Gilbane Company	
	Contract ID	PO# 9741-07202.2001	
	Contract Term	Fall of 2015	
	Project	PV Shelf Superfund Site: Seawater Contaminant Testing	
	Analyses	PCB congeners via 1668A and OC Pesticides via modified 1699 on large volume sea waters	
	Scope	160 Seawater Samples	
	Contacts	Thomas W. Beer | Project Chemist | Gilbane	Robert Lindfors, P.E. | Sr. Project Manager | Gilbane
		O: (925) 946-3296 | M: (925) 260-8695 | F: (925) 682-8125	O: (925) 946-3173 | M: (925) 260-7485
		Beer, Thomas <TBeer@GilbaneCo.com>	Lindfors, Robert A. <RLindfors@GilbaneCo.com>
		1655 Grant Street Floor 12 | Concord, CA 94520	1655 Grant Street Floor 12 | Concord, California | 94520
B2	**Contracting Organization**	TerraTherm Inc.	
	Contract ID	DaNang (Viet Nam) Airport Agent Orange Decomtamination	
	Contract Term	April 2014 weekly (with minimal breaks) to Spring 2018	
	Project	Monitoring water discharge waters, stack emissions, ambient emissions and swabs.	
	Analyses	PCDD/F via HRMS - All water results in 3-4 day turn-around time	
	Scope	PCDD/F and PCB Contaminant Impact from Feeds	
	Contacts	Alyson Fortune	
		Senior Scientist	
		TerraTherm Inc.	
		151 Suffolk Lane	
		Gardner MA 01440	
		978-730-1241	

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B3	**Contracting Organization**	City of Spokane
	Contract ID	OPR 2017-0770
	Contract Term	2017 to present
	Project	Storm Water Monitoring
	Analyses	PCB (1668C - HRMS), BDPE (1614A - HRMS)
	Scope	~40 samples per year
	Contacts	Jeff Donovan | City of Spokane RPWRF | Environmental Analyst
		4401 N Aubrey L. White Parkway, Spokane, WA 99205
		(509) 625-4638 | jdonovan@spokanecity.org
B4	**Contracting Organization**	Metro Vancouver
	Contract ID	718918
	Contract Term	Summer/Fall of 2021
	Project	BC Storm Sewer Discharges
	Analyses	PCB (1668C - HRMS), BDPE (1614A - HRMS)
	Scope	18 samples in 2021 for PCB via 1668C; 25 for BDPE via 1614A
	Contacts	Metro Vancouver
		Jacqueline Liu-Pope 604-436-6700
		Metrotower III-Mailroom 11th Floor
		4515 Central Boulevard
		Burnaby, BC V5H 0C6
		Jacqueline.Liu@metrovancouver.org
B5	**Contracting Organization**	Triton Environmental Consultants
	Contract ID	Kitimat LNG Port Dredging
	Contract Term	Aug 2018 to 2021
	Project	PCDD/F and PAHs in Waters and Sediments
	Analyses	PCDD/F at ALS Burlington and PAHs at ALS Burnaby
	Scope	889 PCDD/F samples in waters and 1986 PAHs samples in sediments
	Contacts	John Rithaler
		Suite 650, 1040 West Georgia St, Vanouver
		tel (604) 631-2213

2. EXPERIENCE OF THE FIRM

[The proposal includes responses to all solicitation listed items (reproduced below) in sequence in the sub-sections that follows. The solicitation requests have been reproduced in blue type of the corresponding Section for ease of reference for the reader. ALS responses are in black type.]

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1. Indicate the experience the Firm and any subcontractors have in the following areas:

a. General Analysis of Environmental Samples.

b. Organic Analysis of Environmental Samples.

c. HRGC/HRMS Analysis of Environmental Samples.

2. Indicate other relevant experience that indicates the qualifications of the Firm, and any subcontractors, for the performance of the potential contract.

3. Include a list of contracts the Firm has had during the last five (5) years that relate to the Firm's ability to perform the services needed under this RFP. List contract reference numbers, contract period of performance, contact persons, telephone numbers, and fax numbers/e-mail addresses. The Firm grants permission to the City to contact the list provided.

A presentation of some of the ALS Burlington relevant experience has been presented in Section 1.2 of this management proposal and in List B below.

ALS Burlington specializes in high end organic (e.g. HRMS analyses), air toxic analyses and specialty projects. The laboratory and staff expect and cater to projects with a greater than normal requirement for client to laboratory communication and for a high level of analytical skill (both instrumental and clean-ups).

To illustrate such skills and experience, we list a few unusual projects within the last year:

LIST B:

a) Toxaphene via EPA method 8276 (GC/RLMS SIM using electron capture negative ionization (EC/NI) with US EPA Region 4 oversight. To help our client, this EC/NI method was implemented and validated in the ALS Burlington facility directly in support of this single project.

b) EPA Method 1668C 209 PCB congener analysis on a plethora of commercial products for Washington State

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c) Parent and Alkyl PAH analysis on 160 fish tissues from upstream of the Alberta tar sands operations for Environment Canada via GC/LRMS SIM

d) A study for the bioavailability of PCDD/F in anti-caking clay. A commercial clay used as a food additive with natural PCDD/F contamination was tested for acid leaching mimicking stomach activity. ALS assisted in the project design, prepared 10L acid leachates and analysed the leachates for PCDD/F content.

e) PCB heat transfer experiments in paint samples for the US military via EPA method 1668C. The experimental design was to determine the amount of PCBs lost during heating of paint chips. The project needed the design and implementation of temperature controlled stripping of paint samples while capturing the volatile emissions. ALS successfully designed the equipment and analysed PCB congeners from the paint and effluents to determine the % volatile losses. This experiment utilized ALS Burlington's specializations in both HRMS analyses and in air toxics sampling.

For ALS Burlington, the HRMS analyses of waters and solids for PCB congeners, for BDPE and for 2,3,7,8-TCDD are routine. In the last year, ALS Burlington has analysed and reported the following numbers of samples for these HRMS analyses on samples from almost any matrix that can be imagined including wastewaters, drinking waters, soils/sediments, municipal waste sludges/biosolids, human blood serum, foods, feedstuffs, food/feed additives, animal/fish tissues, stack emissions and ambient air. This does not analyses of these same analytes by other HRMS methods.

ALS Burlington - Number of Samples for EPA HRMS Methods

Analysis	Number of Samples in the Last 12 Months
PCDD/F via EPA Method 1613B	3431
PCB via EPA Method 1668A/C	3222
BDPE via EPA Method 1614A	738

Example projects have been documented above within this section, within Section 1.2 above. The Section 1.2 Tables 1A and 1B provides contact and contact information that the City of Spokane can discuss ALS performance at their discretion.

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3. REFERENCES

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List names, addresses, telephone numbers, and fax numbers/e-mail addresses of three (3) business references for whom work has been accomplished and briefly describe the type of service provided. The Firm grants permission to the City to contact the references provided. Do not include current City staff as references. The City may evaluate references at the City's discretion.

All requested contacts and references have been provided in the response above in Sections 1 and 2.

4. RELATED INFORMATION

[The proposal includes responses to all solicitation listed items (reproduced below) in sequence in the sub-sections that follows. The solicitation requests have been reproduced in blue type of the corresponding Section for ease of reference for the reader. ALS responses are in black type.]

1. If the Firm has had a contract terminated for default in the last five (5) years, describe the incident. Termination for default is defined as notice to stop performance due to the Firm's non-performance or poor performance and if the

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issue of performance was either (a) not litigated due to inaction on the part of the Proposer, or (b) litigated and such litigation determined that the Proposer was in default.

2. Submit full details of the terms for default including the other party's name, address, and phone number. Present the Firm's position on the matter. The City will evaluate the facts and may, at its sole discretion, reject the Proposal on the grounds of the past experience. If no such termination for default has been experienced by the Firm in the past five (5) years, so indicate.

ALS Canada Ltd has not had any contract defaults from any of its operations over the last five years. In regards to scope, ALS Canada Ltd include some 13 environmental lab operations, 3 minerals lab operations and 2 tribology lab operations.

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5. TABLE OF ATTACHMENTS

Attach. ID.	Description
M1	Organizational Charts
M2	ALS Burlington Statement of Qualifications
M3	ALS Burlington Key Staff Resumes

TECHNICAL PROPOSAL

IN RESPONSE TO: CITY OF SPOKANE RFP# 5715-22

TITLED: "HRGC/HRMS ANALYSIS OF ENVIRONMENTAL SAMPLES PROFESSIONAL TESTING SERVICES"

DUE DATE: AUGUST 19TH, 2022, 9:00AM PACIFIC

SUBMITTED TO:

ATTN: CITY OF SPOKANE - PURCHASING

4TH FLOOR, CITY HALL

808 W. SPOKANE FALLS BLVD.

SPOKANE WA 99201-3316

PRESENTED BY: ALS GROUP USA CORP, 10450 STANCLIFF RD HOUSTON TX 77099

LAB LOCATION: 1435 NORJOHN COURT, BURLINGTON, ONTARIO, CANADA L7L 0E6

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1. PROJECT APPROACH / METHODOLOGY

[The proposal includes responses to all solicitation listed items (reproduced below) in sequence in the sub-sections that follows. The solicitation requests have been reproduced in blue type of the corresponding Section for ease of reference for the reader. ALS responses are in black type.]

Include a complete description of the Firm's proposed approach and methodology for the project. This section should convey Firm's understanding of the proposed project.

The scope of services is presented in Section 2.1 of the RFP and includes the HRMS analyses of 2,3,7,8-TCDD, PCB congeners (209) and selected BDPE congeners from various waters and solids.

A summary of the ALS methodology is presented in Sections 1.1 and 1.2 below. Detailed methodology is presented in the SOPs provided in Attachments T1 through T5 (uploaded as a separate combined "PROPRIETARY INFORMATION" file)

Attachment:
T1 = TM-TM-1107 PCDD/F Instrumental Method
T2 = TM-TM-1109 BDPE Instrumental Method
T3 = TM-TM-1105 PCB Instrumental Method
T4 = TM-TM-1110 HRMS Prep Method
T5 = TM-TM-2109 BDPE Prep Method

1.1 Extraction & Clean-up

Waters without visible solids are spiked with C-13 labelled extraction standards and extracted by separatory funnel technique using dichloromethane as the extracting solvent.

Waters with any visible solids are spiked with labelled extraction standards before filtering. The filtrates are extracted by separatory funnel technique using dichloromethane as the extracting solvent. The solids are extracted via Dean Stark soxhlet technique using toluene as the extracting solvent. The combined filtrate and solids extracts are cleaned and analysed as below.

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Solids are spiked with C-13 labelled extraction standards are extracted via Dean Stark soxhlet technique using toluene as the extracting solvent.

ALS has a full suite of column chromatographic clean-up options including GPC, acid silica gel/multi-layered silica gel, alumina, florosil and carbon clean-ups for HRMS targets. Any or all of the techniques may be employed in order to provide quality extracts for instrumental analyses.

Typically for situations with limited sample and for extracts requiring PCDD/F, PCB and/or BDPE analyses, the common extracts are cleaned with acid silica/multi-layered silica and then alumina column chromatographies. These extracts are then analysed for PCB and BDPE congeners. Following these analyses, the extracts are cleaned by carbon column clean-up for analysis of PCDD/F and/or coplanar PCBs as required. Of course, separate extraction, clean-up and analysis for the PCDD/F, PCB and/or BDPE targets is an option for samples in generous supply.

1.2 Instrumental Analysis

Instrumental analysis on the applicable EPA methods (i.e. 1613B, 1668C and 1614A) are all via isotope dilution GC/HRMS. ALS employs the following C-13 labelled extraction internal standards as quantitative references for these analyses:

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Labeled Extraction Standards[1.] as Quantitation References for Isotope Dilution Analyses		
PCDD/F	**PCB**	**BDPE**
13C12-2,3,7,8-TCDD	13C12-PCB-1	13C12-BDPE-15
13C12-1,2,3,7,8-PeCDD	13C12-PCB-3	13C12-BDPE-28
13C12-1,2,3,4,7,8-HxCDD	13C12-PCB-4	13C12-BDPE-47
13C12-1,2,3,6,7,8-HxCDD	13C12-PCB-15	13C12-BDPE-77
13C12-1,2,3,4,6,7,8-HpCDD	13C12-PCB-19	13C12-BDPE-99
13C12-OCDD	13C12-PCB-37	13C12-BDPE-100
13C12-2,3,7,8-TCDF	13C12-PCB-54	13C12-BDPE-126
13C12-1,2,3,7,8-PeCDF	13C12-PCB-81	13C12-BDPE-153
13C12-2,3,4,7,8-PeCDF	13C12-PCB-77	13C12-BDPE-154
13C12-1,2,3,4,7,8-HxCDF	13C12-PCB-104	13C12-BDPE-169
13C12-1,2,3,6,7,8-HxCDF	13C12-PCB-123	13C12-BDPE-183
13C12-2,3,4,6,7,8-HxCDF	13C12-PCB-118	13C12-BDPE-197
13C12-1,2,3,7,8,9-HxCDF	13C12-PCB-114	13C12-BDPE-205
13C12-1,2,3,4,6,7,8-HpCDF	13C12-PCB-105	13C12-BDPE-207
13C12-1,2,3,4,7,8,9-HpCDF	13C12-PCB-126	13C12-BDPE-209
13C12-OCDF	13C12-PCB-155	
	13C12-PCB-167	
	13C12-PCB-156	
	13C12-PCB-157	
	13C12-PCB-169	
	13C12-PCB-188	
	13C12-PCB-189	
	13C12-PCB-202	
	13C12-PCB-205	
	13C12-PCB-208	
	13C12-PCB-206	
	13C12-PCB-209	
[1.] Added to the samples just prior to extraction		

1.3 Corporate Qualifications

ALS Canada Ltd and ALS Group USA, Corp are the legal name of entities with the common parent of ALS Limited, an Australian publically traded company. ALS environmental laboratories around the world operate under the trade names ALS Life Sciences and ALS Environmental. ALS Limited is one of the largest, most

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geographically diverse, testing companies in the world staffed by over 33,000 persons operating from 370 sites in 65 countries across Africa, Asia, Australia, Europe and the Americas.

2. WORKPLAN

[The proposal includes responses to all solicitation listed items (reproduced below) in sequence in the sub-sections that follows. The solicitation requests have been reproduced in blue type of the corresponding Section for ease of reference for the reader. ALS responses are in black type.]

Include all project requirements and the proposed tasks, services, activities, etc. necessary to accomplish the scope of the project defined in this RFP. This section of the technical Proposal shall contain sufficient detail to convey to members of the evaluation team, the Firm's knowledge of the subjects and skills necessary to successfully complete the project. Include any required involvement of City staff. The Firm may also present any creative approaches that may be appropriate and may provide any pertinent supporting documentation.

Project Initiation:

For a contract of this scope, ALS will initiate at least three 'kick-off' meetings to ensure effective project initiation. The first meeting will be between the bid preparation team (led by Dr Ron McLeod) and the Client Services staff (including Claire Kocharakkal, the acting Client Service Manager) the project manager assigned to this project (Claire Kocharakkal) and the Laboratory General Manager, Scott Preston. This meeting will ensure that all of the RFP and proposal details are discussed and passed on to the Project Management staff.

The second meeting, by conference call, will be between the ALS Client Services staff and the assigned City of Spokane contact(s). This will cover the expected scope with particular interest to (a) establish communications and (b) ensure that all sampling media and sampling/analytical scheduling has been tabled.

The third meeting is again internal to ALS. The customer service and sales staffing will meet with the production staffing to ensure all analytical details and protocols are discussed and understood.

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Project Scheduling:

Coordination of project scheduling is driven by our LIMS (Laboratory Information Management System). All shipments and media preparations are logged and scheduled through this system. All analyses and reporting timelines are scheduled through this system. Our LIMS does drive all our programs (both field support and lab support) effectively ensuring that deadlines are monitored and met.

Login and Login Reviews:

The maintenance of the project and sample entries into LIMS is by the Client Services department, especially via our primary Sample Custodian and LIMS logger, Aaron Burton. All samples are logged the same day as receipt. All LIMS entries are reviewed and errors corrected by the assigned Project Manager or designate immediately. The client is immediately notified of any documentation problems or concerns on sample integrity. Confirmations of sample receipt are sent to our clients automatically the evening after login.

This process of LIMS entries and review is employed for both samples and for media prep. Therefore, shipments of supplies/media to the field as scheduled appropriately.

Labelling:

All samples are assigned a unique alpha numeric ALS sample ID#. A label is generated for each sample container that includes this lab ID number as well as the LIMS entry of the Client Sample ID. This labelling is critical in the review process in order to ensure that these is no sample mix up. A check and comparison of the label with the client labelling is done (a) by the login analyst at the time of labelling, (c) by a second client service staff member after login and (c) by the prep analyst before proceeding with the analysis.

Project Notes/Special Instructions:

For each contract or project, the assigned Project Manager maintains an electronic project entry file which details all project requirements that are outside of standard our services. These include custom project details such as (a) cooler media packaging requirements, (b) extra QC or reporting requirements (c) contact lists (d) client special instructions and (e) invoicing details. This file is available to all customer service staffing.

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When some of the special instructions are needed for the prep or instrumental analyses, such instructions are entered into a LIMS field available to all analysts. In this case, there is a flag to all analysts to review the special instructions specific to this sample or a specific analysis.

Prep Sheets:

For each preparative batch of samples/analyses, a batch sheet is prepared by the Prep Manager or Prep Supervisor. This document follows the batch throughout the lab from prep to instrument and to data package preparation. It includes all of the samples IDs associated with the batch, the batch QC requirements, general and specific batch instructions, reagent traceability and any specific notes from the prep analyst on observations and issues encountered while processing the batch.

Instrumental Analysis:

After sample extraction and cleanup, the final extracts in auto-sampler vials are refrigerated and the batch sheets passed to the instrument analyst group. The prep or batch sheets are used to define the instrument run sequences appropriate for the scheduled analysis. The GC/MS analyst reviews the raw data and prepares the data report. The GC/MS analyst also provides comments on his electronic version of the report. Traceability on the analyst comments and manual integrations are automatically maintained in the electronic reporting file.

Data Review/Reporting:

The multistage review of the data processing and the reports has been documented in Section 1.1 of this Technical Proposal.

Invoicing:

Invoicing is also LIMS generated based upon the analyses logged and linked to the quoted services. The raw invoice is based upon the original login. Certainly changes can occur between the login stage and final invoicing. The raw invoice is modified by the project manager where needed after review of the final report to reflect the completed services provided to the client.

Quality Program:

ALS maintains a full and comprehensive QA/QC program that is fully compliant with the ISO 17025, the NELAC and the US DoD standards.

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Included in this program is periodic PT sample analyses. The table below summarizes the lab performance over last 10 years on PCDD/F, PCB and BDPE PT analyses.

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ALS Burlington 10-Year PE Summary

PT Provider	Study	End Date	PCDD/F 1613B Waters	PCDD/F 1613B Solids	PCB 1668C Waters	PCB 1668C Solids	PBDE 1614A Waters	PBDE 1614A Solids
			Ratio of Acceptable Results to Reported Results					
RTC	WP13-1	1-May-13	27/27	-	17/17	-	7/7	-
RTC	WP13-3B	23-Aug-13	25/25	-	18/18	-	7/7	-
RTC	WP14-1	21-Mar-14	28/28	-	18/18	-	7/7	-
RTC	WP14-3B	12-Sep-14	28/28	-	18/18	-	7/7	-
RTC	WP15-1	27-Feb-15	27/27	-	18/18	-	7/7	-
RTC	WP15-3B	21-Aug-15	28/28	-	18/18	-	7/7	-
RTC	WP16-1	26-Feb-16	28/28	-	18/18	-	7/7	-
RTC	WP16-3B	19-Aug-16	28/28	-	18/18	-	7/7	-
RTC	WP17-1	3-Mar-17	28/28	-	18/18	-	7/7	-
RTC	WP17-3B	25-Aug-17	28/28	-	18/18	-	7/7	-
RTC	WP18-1	2-Mar-18	28/28	-	18/18	-	7/7	-
M/Sigma	WP18-3B	24-Aug-18	28/28	-	18/18	-	N/I [1.]	-
M/Sigma	WP19-1	1-Mar-19	28/28	-	18/18	-	-	-
M/Sigma	WP19-3B	23-Aug-19	28/28	-	18/18	-	N/I [1.]	-
M/Sigma	QT-0027831	17-Mar-20	28/28	-	18/18	-	-	-
M/Sigma	WP20-3B	28-Feb-20	25/28	-	16/18	-	N/I [1.]	-
BiPEA	37B	6-Apr-22					8/8	
M/Sigma	WP21-1	28-Feb-20	28/28	-	18/18	-	-	-
M/Sigma	WP21-3	20-Aug-21	28/28					
M/Sigma	WP22-2	6-May-22	28/28	-	18/18	-	-	-
RTC	LPTP11-S1	25-Mar-11	-	56/56	-	-	-	14/14
RTC	LPTP11-S3	9-Sep-11	-	50/50	-	-	-	13/14
RTC	LPTP12-S1	23-Mar-12	-	54/54	-	14/14	-	14/14
RTC	LPTP12-S3	14-Sep-12	-	54/54	-	14/14	-	13/14
RTC	LPTP13-S1	22-Mar-13	-	27/27	-	7/7	-	7/7
RTC	LPTP13-S3	06-Sep-13	-	27/27	-	8/8	-	7/7
RTC	LPTP14-S1	21-Mar-14	-	27/27	-	8/8	-	7/7
RTC	LPTP14-S3	5-Sep-14	-	27/27	-	8/8	-	7/7
RTC	LPTP15-S1	20-Mar-15	-	27/27	-	6/7	-	6/7
RTC	LPTP15-S3	4-Sep-15	-	27/27	-	6/7	-	7/7
RTC	LPTP16-S1	18-Mar-16	-	27/27	-	8/8	-	7/7
RTC	LPTP16-S3	2-Sep-16	-	27/27	-	8/8	-	7/7
RTC	LPTP17-S1	17-Mar-17	-	27/27	-	8/8	-	7/7
RTC	LPTP17-S3	8-Sep-17	-	27/27	-	8/8	-	7/7
RTC	LPTP18-S1	16-Mar-18	-	27/27	-	8/8	-	7/7
RTC	QT-0023689	28-Nov-18	-	27/27	-	8/8	-	7/7
RTC	LPTP19-S1	15-Mar-19	-	26/27	-	8/8	-	7/7

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PT Provider	Study	End Date	PCDD/F 1613B Waters	PCDD/F 1613B Solids	PCB 1668C Waters	PCB 1668C Solids	PBDE 1614A Waters	PBDE 1614A Solids
			Ratio of Acceptable Results to Reported Results					
M/Sigma	LPTP19-S3	6-Sep-19	-	8/27	-	-	-	-
M/Sigma	QT-0027209	19-Dec-19	-	27/27	-	-	-	-
M/Sigma	QT-0027832	6-Apr-20	-	27/27	-	-	-	-
M/Sigma	QT-0028851	25-Sep-20	-	27/27	-	-	-	-
M/Sigma	LPTP21-S1	12-Mar-21	-	27/27	-	-	-	-
M/Sigma	LPTP22-S1	11-Mar-21		27/27				
Phenova	CAS0111	4-Mar-11	-	-	-	36/36	-	-
Phenova	CAS0711	12-Aug-11	-	-	-	46/46	-	-
Phenova	CAS0712	13-Aug-12	-	-	-	58/58	-	-
Phenova	HW0713	5-Sep-13	-	-	-	27/27	-	-
Phenova	HW0414	12-Jun-14	-	-	-	28/28	-	-
Phenova	HW1014	12-Nov-14	-	-	-	29/29	-	-
Phenova	HW0415	11-Jun-15	-	-	-	30/30	-	-
Phenova	HW1015	10-Dec-15	-	-	-	30/30	-	-
Phenova	HW0416	6-Jun-16	-	-	-	30/30	-	-
Phenova	HW0417	8-Jun-17	-	-	-	29/29	-	-
Phenova	HW1017	21-Dec-17	-	-	-	30/30	-	-
Phenova	HW0418	7-Jun-18	-	-	-	29/29	-	-
Phenova	HW1018	13-Dec-18	-	-	-	29/29	-	-
Phenova	HW0419	6-Jun-19	-	-	-	29/29	-	-
Phenova	HW1019	12-Dec-19	-	-	-	28/29	-	-
Phenova	HW0420	11-Jun-20	-	-	-	29/29	-	-
Phenova	R29907	27-Jan-21	-	-	-	29/29	-	-
Overall Scores			496/499	707/727	321/323	816/821	85/85	144/147
			99.4%	97.2%	99.4%	99.4%	100.0%	98.0%

[1.] Data from 2018-2020 are not included in the statistics. Data under dispute. RTC design values (only a couple of participants), repeatablly did not match our values against multiple standard sources and multiple investigations. Issue was resolved for ALS by moving our PT program to BIPEA.

[2.] PCDD/F data for waters does not include the annual drinking water PTs for 2,3,7,8-TCDD. ALS has never failed these PTs.

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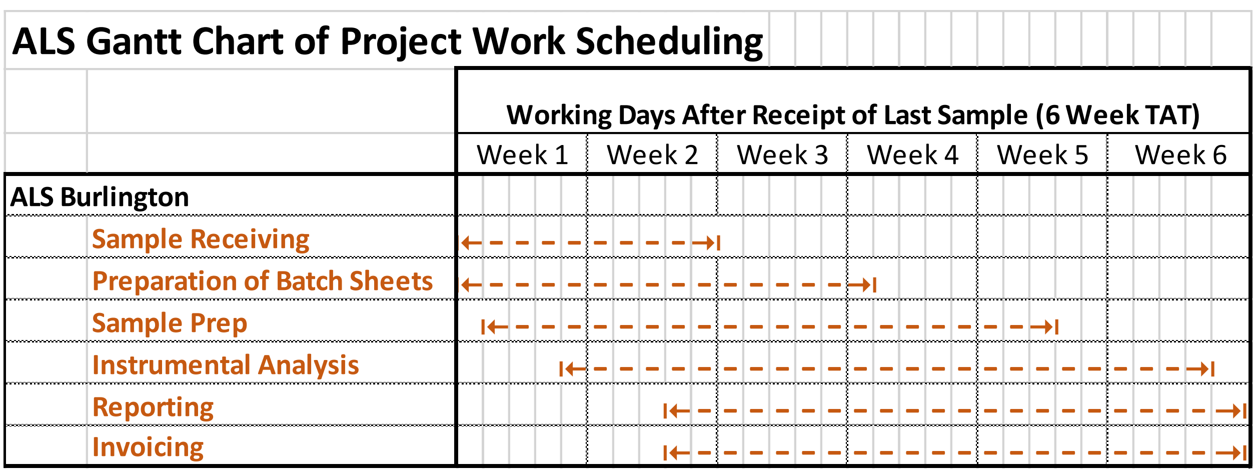
3. PROJECT SCHEDULE

[The proposal includes responses to all solicitation listed items (reproduced below) in sequence in the sub-sections that follows. The solicitation requests have been reproduced in blue type of the corresponding Section for ease of reference for the reader. ALS responses are in black type.]

Include a project schedule indicating when the elements of the work will be completed and when deliverables, if any, will be provided.

A Gantt chart with a per submission scheduling is presented below based upon the maximum deliver time of 45 days as defined in Section 2.2 (1) of the RFP.



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4. DELIVERABLES

[The proposal includes responses to all solicitation listed items (reproduced below) in sequence in the sub-sections that follows. The solicitation requests have been reproduced in blue type of the corresponding Section for ease of reference for the reader. ALS responses are in black type.]

Fully describe deliverables to be submitted under the proposed project.

Project deliverables are defined in Section 2.2 of the RFP which includes all calculated sample and QC data while reporting in .pdf and Excel spreadsheets. The electronic data and all reportables (Including the specialty EDDs) have been successfully provided to the City of Spokane for the last similar contract since 2017. All systems are currently in place. The report must include a narrative which discusses methods, analytical difficulties and results that are outside of the acceptance criteria and an explanation of data qualifiers employed. The report must also include the most recent MDL study, EDLs for all reported targets, RLs below those in the RFP Table 3.

An example of the ALS standard .pdf report is provided in Attachment T6 for review. This example report is for PCB but the format is the same for BDPE and for 2,3,7,8-TCDD. This report covers all of the RFP elements except for the most recent MDL study which will be included in each report.

RFP Section 2.2 (11) provides project specific instructions on how to calculate and flag total PCB congener results.

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5. REPORTING LIMITS

[The proposal includes responses to all solicitation listed items (reproduced below) in sequence in the sub-sections that follows. The solicitation requests have been reproduced in blue type of the corresponding Section for ease of reference for the reader. ALS responses are in black type.]

Include a copy of the most recent MDL studies which will support the requested reporting limits indicated in Table 2 of the Scope of Work.

A copy of the most recent MDL studies for PCB via 1668C, for PCDD/F via 1613B and BDPE via 1614A are provided in Attachment T7

6. ACCREDITATION

[The proposal includes responses to all solicitation listed items (reproduced below) in sequence in the sub-sections that follows. The solicitation requests have been reproduced in blue type of the corresponding Section for ease of reference for the reader. ALS responses are in black type.]

Include documentation which certifies the methods and analytes listed in Table 1 of the Scope of Work are accredited with Ecology for all laboratories that will be used (including any subcontracted laboratories). If multiple labs will be utilized, indicate which laboratories will be conducting which analyses.

ALS holds Washington State DOE accreditations for all of the project targets for both solids and for waters as listed in the WA DOE accreditation scope listing in Attachment T8a (Certification) and T8b (Scope of Accreditation).

In addition, ALS holds primary accreditations for all project related targets and matrices from CALA to ISO 17025 standards and from LA DEQ to the NELAP Standard. Futhermore, ALS holds primary accreditations for the PCB (via 1668C) and

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2,3,7,8-TCDD (via 1613B) targets from PJLA to US DoD & to ISO 17025 standards. Copies of all of these primary sources of accreditations are provided in Attachments T9a through T9e.

All of the analyses will be performed at the ALS Burlington Ontario HRMS laboratory the holder of all of the accreditations listing in Attachments T8 and T9.

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7. TABLE OF ATTACHMENTS

Attach. ID.	Description
T1	SOP TM-TM-1107 PCDD/F Instrumental Method
T2	SOP TM-TM-1109 BDPE Instrumental Method
T3	SOP TM-TM-1105 PCB Instrumental Method
T4	SOP TM-TM-1110 HRMS Prep Method
T5	SOP TM-TM-2109 BDPE Prep Method
T6	Example PCB .pdf Report
T7	Most Recent MDL Studies
T8a	ALS Burlington's Washington State Certificate
T8b	ALS Burlington's Washington State Scope
T9a	ALS Burlington's PJLA Cert and Scope
T9b	ALS Burlington's CALA Cert
T9c	ALS Burlington's CALA Scope
T9d	ALS Burlington's LA DEQ Cert
T9e	ALS Burlington's LA DEQ Scope

COST PROPOSAL

IN RESPONSE TO: CITY OF SPOKANE RFP# 5715-22

TITLED: "HRGC/HRMS ANALYSIS OF ENVIRONMENTAL SAMPLES PROFESSIONAL TESTING SERVICES"

DUE DATE: AUGUST 19TH, 2022, 9:00AM PACIFIC

SUBMITTED TO:

ATTN: CITY OF SPOKANE - PURCHASING

4TH FLOOR, CITY HALL

808 W. SPOKANE FALLS BLVD.

SPOKANE WA 99201-3316

PRESENTED BY: ALS GROUP USA CORP, 10450 STANCLIFF RD HOUSTON TX 77099

LAB LOCATION: 1435 NORJOHN COURT, BURLINGTON, ONTARIO, CANADA L7L 0E6

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Contents

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1. INTRODUCTION

ALS Canada Ltd and ALS Group USA, Corp are pleased to provide this proposal to the City of Spokane for RFP# 4372-17, 'HRGC/HRMS ANALYSIS OF ENVIRONMENTAL SAMPLES'.

ALS Canada Ltd and ALS Group USA, Corp are the legal name of entities with the common parent of ALS Limited, an Australian publically traded company. ALS environmental laboratories around the world operate under the trade names ALS Life Sciences and ALS Environmental. ALS Limited is one of the largest, most geographically diverse, testing companies in the world staffed by over 11,000 persons operating from 370 sites in 65 countries across Africa, Asia, Australia, Europe and the Americas.

ALS under ALS Group USA, Corp holds a Washington State business license (UBI# 602998939) laboratories in Kelso WA and in Everett WA. The ALS Canada Ltd environmental laboratory facility in Burlington, Ontario Canada will be providing all of the analytical services if awarded the contract since this ALS facility specializes in the analyses of US EPA methods via GC/HRMS required for this contract.

ALS is bidding on this contract in whatever manner is acceptable to the City of Spokane based upon its existing business license registered under ALS Group USA, Corp. This contract can be awarded directly to ALS Canada Ltd (as an affiliate of the business license to ALS Group USA. Corp) or to ALS Group USA, Corp (with ALS Canada Ltd as a sub-contractor) - whichever way the City of Spokane prefers to accept the existing business license,

The proposal herein is valid for any defined and valid timeline requirement for the RFP or for 60 days following the closing date of the bid solicitation whichever is longer.
The proposal is comprised of the following:

- electronic files including the following parts:

a) Letter of Submittal
   - Including 3 Attachments

b) Technical Proposal
   - Including 9 Attachments, 5 of which are "Proprietary Information" submitted separately

c) Management Proposal

d) Cost Proposal

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2. PRICING TABLE

Table 4		
Item No.	***Analyte(s)/Method***	***Unit Price ($cost/sample)***
1	All 209 PCB Congeners by EPA 1668C	$595
2	PBDEs (only BDE-28, 47, 66, 85, 99, 100, 138, 153, 154, 183, 209) by EPA 1614	$595
3	2,3,7,8-TCDD only (no other dioxins/furans required) by EPA 1613	$275

Table 4 unit pricing includes (a) the shipping of empty coolers and sample bottles and (b) return shipping.

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3. TERMS & CONDITIONS

ALS is unable to accept unlimited liabilities and will need to come to reasonable and acceptable terms with City of Spokane. Examples of concerns are listed below:

Limit of Firm's Liability

(1) Nothing in this agreement limits or excludes the Firm's liability:

(i) for death or personal injury caused by its negligence or willful misconduct or that of its employees, agents or subcontractors as applicable;
(ii) for fraud or fraudulent misrepresentation by it or its employees, agents or subcontractors as applicable; or
(iii) where liability cannot be limited or excluded by Applicable Laws.

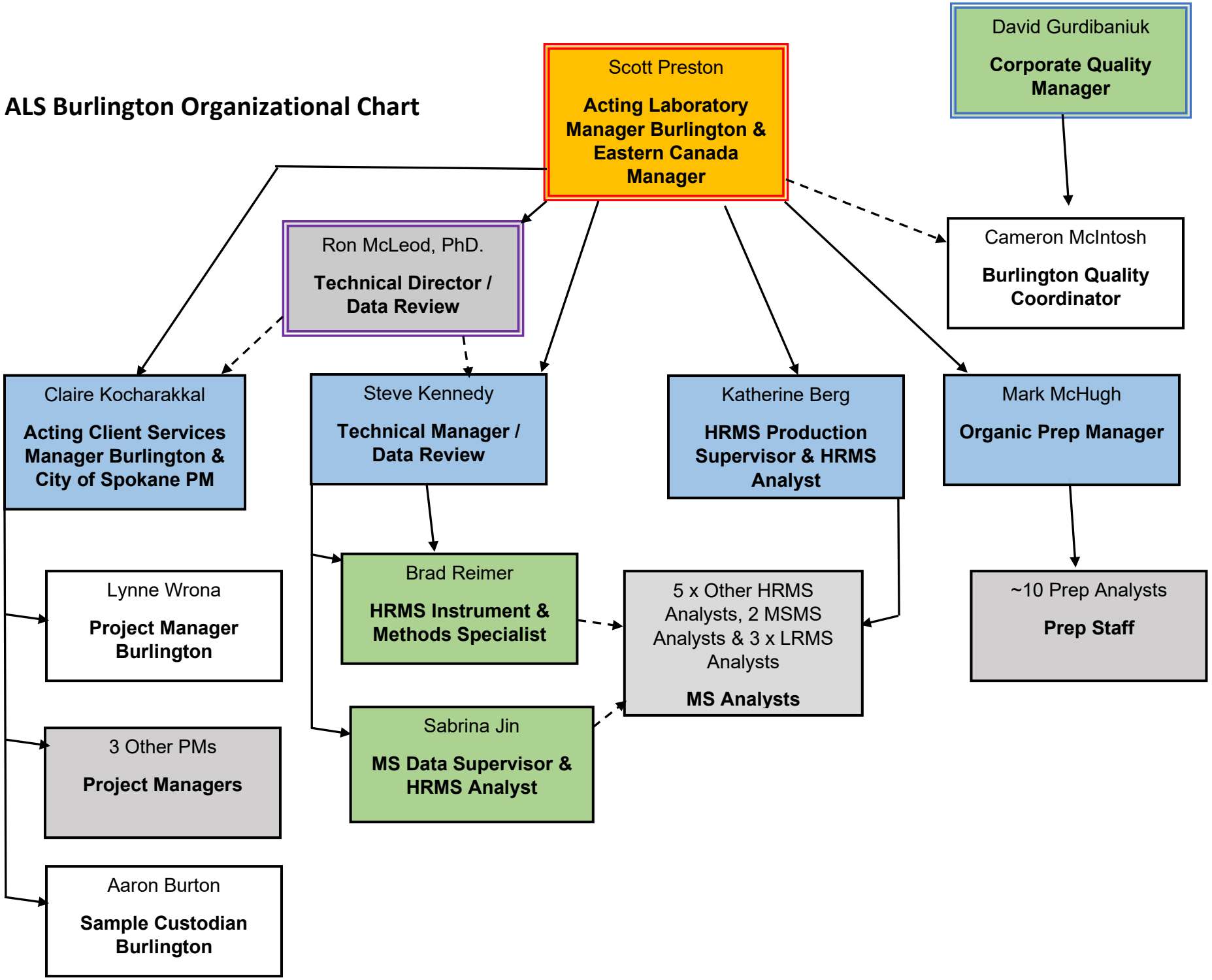
(2) the Firm excludes any liability to the City, whether in contract, tort (including negligence) or otherwise, for any special, indirect or consequential loss arising under or in connection with this agreement, including any:

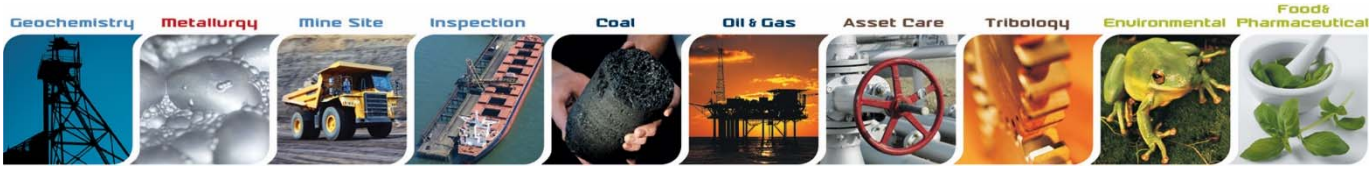
(i) loss of profits;
(ii) loss of sales or business;
(iii) loss of production;
(iv) loss of agreements or contracts;
(v) loss of business opportunity;
(vi) loss of anticipated savings;
(vii) loss of or damage to goodwill;
(viii) loss of reputation; or
(ix) loss of use or corruption of software, data or information.

(3) The Firm's aggregate liability in respect of claims based on events arising out of or in connection with this agreement or any collateral contract (excluding loss or damage to real or personal property), whether in contract or tort (including negligence) or otherwise, will in no circumstances exceed an amount equal to the total fees payable by the City to the Firm under this Agreement or $250,000 (whichever is greater).

(4) The Firm's aggregate liability to the City for any loss or damage to real or personal property whatsoever which arises under or in connection with this agreement or any collateral contract, and whether by way of an indemnity or statute, in tort (for negligence or otherwise), or on any other basis in law or equity, is limited to $5,000,000 in aggregate.

ALS Burlington Organizational Chart





ALS Burlington
Statement of Qualifications

Laboratory Services Covering:

- Food & Agricultural
- Air Toxics
- Environmental

Revision 35: Nov 2021

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ALS CANADA LTD a subsidiary of **ALS Limited** (ASX: ALQ)

1.0 Introduction and Background

The ALS Life Sciences Burlington facility is a laboratory established in 2005 while focused upon the HRMS and Air Toxic analytical markets. Our HRMS workload is based upon a broad base of sources but generally environmental samples (air, soil, sediment and water) and agriculture/food products. Our air toxics sample workload is derived primarily from stack and ambient air monitoring. The entire laboratory management and supervisorial staff are persons with extensive experience specific to our niche market operations.

ALS Life Science and ALS Environmental are trade names under the registered company ALS Canada Ltd. ALS Canada Ltd is a solely owned subsidiary of ALS Limited, a publicly traded Australian company.

ALS is one of the largest, most geographically-diverse, testing companies in the world processing over 20 million samples per year. With over 300 laboratories and 15000 staff in more than 65 countries, we have the expertise and the resources to provide our clients with analytical and technical support for local and international environmental monitoring projects. Specific to HRMS services, ALS has 5 labs worldwide including Houston (USA), Brisbane (Australia), Istanbul (Turkey), Prague (Czech Republic) and this one in Burlington ON (Canada). ALS Environmental laboratories have been operating in Australia since 1975 and in Canada since 1982.

2.0 Scope of Analytical Services

Table 1: ALS Burlington's Primary Analytical Services

Analyte	Primary Method ID	Agency Reference
Life Sciences: Agriculture, Food & Feed Products and Blood Serum Testing		
PCDD/F	1613B	US EPA OW
PCB	1668A&C	US EPA OW
PAH	Isotope Dilution GC/HRMS	mod. California ARB
BDPE	1614A	US EPA OW
OCP	mod. 1699 (GC/HRMS)	US EPA OW
Metals	233 (ICPMS)	USP
Mercury	7471B (cvaa)	US EPA OSW
Air Toxics Services: Stack & Ambient Air Testing		
PCDD/F	23	US EPA OAQPS
	0023A/8290B	US EPA SW846
	TO-9A	US EPA ORD
	RM/2&3	Environment Can.
PAH	429	California ARB
	TO-13A	US EPA ORD
	IP7	US EPA ORD
PCB	428	California ARB
	1668A&C	US EPA OW
	RM/31	Environment Can.
	TO-4A	US EPA ORD
SVOC	3542/8270D	US EPA SW846
OCP	TO-4A	US EPA ORD
Chlorophenols	Derivatization GC/MS SIM	ALS In-House
Volatiles	VOST (5041A/8260C)	US EPA SW846
	TO-17	US EPA ORD
Multi-Metals/Hg	29	US EPA OAQPS
	0060/6020A/7470A	US EPA SW846
	IO3-1/IO3-5	US EPA ORD
Mercury (Hg)	101A	US EPA OAQPS
	'Ontario Hydro'	ASTM D6784-02
Particulates	5, 5D, 17, 201A, 202	US EPA OAQPS
	IO1-1	US EPA ORD
Acid Gases	26 & 26A	US EPA OAQPS
	9057	US EPA SW846
Ammonia	CTM-027	US EPA OAQPS
SO2/H2SO4	6 and 8	US EPA OAQPS

Environmental Services: Solid, Soil, Sediment & Water Testing		
PCDD/F	1613B	US EPA OW
	8290A	US EPA SW846
	DLM 02.2	US CLP
PAH	mod. 429	California ARB
PCB	1668A&C	US EPA OW
	CBC 01.2	US CLP
	mod. 680	US EPA ORD
BDPE	1614A	US EPA OW
PCN	GC/HRMS isotope dilution	In-House
OCP	mod. 1699	US EPA OW
Metals	6020A (icpms)	US EPA SW846
Mercury	7471B (cvaa)	US EPA SW846

Key:
PCDD/F = Polychlorinated dibenzo(p)dioxins and polychlorinated dibenzofurans
PAH = Polyaromatic Hydrocarbons
PCB = Polychlorinated Biphenyls
BDPE = Polybrominated Diphenyl Ethers
PCN = Polychlorinated Naphthalenes
OCP = Organochlorine Pesticides
SVOC = Semi-Volatile Organic Compounds
VOST = Volatile Organic Sampling Train

For air toxic methods that include both sampling and analytical portions, ALS offers only the analytical portion of the methods.

3.0 Scope of Accreditations & Licenses

ALS maintains ISO 17025 based accreditations, US Department of Defense environmental accreditations and NELAP accreditations. ALS Burlington is accredited by four separate primary accrediting authorities:

1) Canadian Association for Laboratory Accreditation (CALA) to ISO 17025:2017 standards
2) NELAP through Louisiana DEQ to the NELAC TNI:2009 standard
3) Perry Johnson Laboratory Accreditation, Inc. (PJLA) to both the ISO 17025:2017 standards and to the US Department of Defense (DoD) enhanced version of the TNI:2009 standard.
4) CEAEQ (Centre d'expertise en analyse environnementale du Québec) to the ISO 17025:2005 standard.

In addition, ALS Burlington holds (a) secondary NELAP accreditation through the US states of Alaska, California, Florida, Georgia, Hawaii, Michigan, New Jersey, New York, Pennsylvania, Texas and Virginia & (b) state accreditation with Washington and West Virginia.

Details definitions of accredited analyses are presented in Tables 2 and 3 that follow below. The CALA and PJLA accreditations cover both environmental and agriculture/food specialties while accreditations from the other bodies are for environmental testing only. The accreditation process includes document and on-site reviews to demonstrate compliance with ISO 17025 defined standards with respect to laboratory quality systems and the analyses/parameters as listed in the laboratory's application.

3.1 Accreditations by Method and Matrix

Table 2: ALS Burlington ISO 17025 and US DoD Accreditations (next page)
Table 3: ALS Burlington NELAC Accreditations (following page)

Table 2: ALS Burlington ISO 17025 and US DoD Accreditations

	Accrediting Body:	CALA	PJLA	Quebec CEAEQ	WA DOE
	Accrediting Standard	ISO 17025:2017	ISO 17025:2017 & DoD	ISO 17025:2005	ISO 17025:2017
Target Analytes	**Matrices**	**Accreditations by Method**			
PCDD/F	Water	1613B, 8290A	1613B, 8290A, MSMS[3.]	1613B, 8290A	1613B (TCDD)
	Soil/Sediment/Solid	1613B, 8290A	1613B, 8290A, MSMS[2.]	1613B, 8290A	1613B, 8290A
	Biota/Tissue	1613B, 8290A, MSMS[2.]	1613B, 8290A, MSMS[2.]	-	1613B, 8290A
	SPMD Media	1613B	-	-	-
	Stack/Ambient Air	M23, 0023A, TO-9A	M23, 0023A, TO-9A	-	-
PCB	Soil/Sediment/Solid	1668A&C	1668A&C, MSMS[2.]	-	1668C
	Non-Potable Water	-	1668A&C	-	1668C
	Potable Water	-	1668A&C	-	1668C
	Stack/Ambient Air	-	1668A&C	-	-
	SPMD Media	1668A&C			
	Biota/Tissue	1668A&C [1.], MSMS [2.], 680	1668A&C, MSMS [2.]	-	1668C
PAH	Stack/Ambient Air	CARB 429, TO-13A	-	-	-
	Soil/Sediment/Solid	mod C429	-	-	-
	SPMD Media	mod C429	-	-	-
	Biota/Tissue	mod C429 HR [1.]	-	-	-
BDPE	Drinking Water	1614A	-	-	1614A
	Non-Potable Water	1614A	-	-	1614A
	Soil/Sediment/Solid	1614A	-	-	1614A
	Biota/Tissue/Food	1614A [1.]	-	-	1614A
	SPMD Media	1614A	-	-	-
	Stack/Ambient Air	1614A	-	-	-
OCP	Soil/Sediment/Solid	mod 1699	-	-	mod 1699
	Biota/Tissue	mod 1699	-	-	-
	SPMD Media	mod 1699	-	-	-
PCN	Soil/Sediment/Solid	GC/HRMS	-	-	-
	Biota/Tissue	GC/HRMS	-	-	-
VOC-VOST	Stack/Ambient Air	5041A/8260B&C	-	-	-
Taste & Odour SVOCs	Waters	GC/HRMS	-	-	-
ICPMS Elements	Stack/Ambient Air	M29 & 0060/6020A	-	-	-
	Soil/Sediment/Solid	6020A	-	-	-
	Biota/Tissue	6020A	-	-	-
Mercury	Stack/Ambient Air	M29/101A, ASTM D6784	-	-	-
	Soil/Sediment/Solid	7471B	-	-	-
	Biota/Tissue	7471B	-	-	-
Acid Gases (HF, HCl, HBr)	Stack Air	M26, M26A, 9057	-	-	-
Acid Gases (Cl_2, Br_2)	Stack Air	M26, M26A, 9057	-	-	-
Ammonia	Stack Air	CTM-027	-	-	-
SOx	Stack Air	mod M6/M8 (via IC)	-	-	-
NOx	Stack Air	M7A, M7D	-	-	-
Particulate	Stack Air/Ambient	M5, IO-3.1	-	-	-
Moisture	Solids	Grav.	-	-	-

[1.] Accredited with CALA under the Food and Agricultural Product program specialty

[2.] Also includes PCDD/F and selected PCB congeners via GC/MSMS (modified draft method 16130) to ISO 17025

[3.] Also includes PCDD/F congeners via GC/MSMS (modified draft method 16130) to ISO 17025

ISO 17025:2017 and ISO 17025:2005 = The current standards from ISO for Testing and Calibration Laboratories

CALA = Canadian Association for Laboratory Accreditation

PJLA = Perry Johnson Laboratory Accreditation, Inc.

CEAEQ = Centre d'expertise en analyse environnementale du Québec

WA DOE = State of Washington Department of Ecology

Table 3: ALS Burlington NELAC Accreditations

Accrediting Body: / Accreditation: / Accrediting Standard		LA DEQ NELAP Primary TNI:2009	AK DEC LELAP/PJLA DoD 2nd^ary TNI:2009	FL PHL NELAP 2nd^ary TNI:2009	NJ DEP NELAP 2nd^ary TNI:2009	NY DOH NELAP 2nd^ary TNI:2009	PA DEP NELAP 2nd^ary TNI:2009	TX TCEQ NELAP 2nd^ary TNI:2009	VA DGS NELAP 2nd^ary TNI:2009	WV DEP ELAP WV DEP
Target Analytes	**Matrices**	**Accreditations by Method**								
PCDD/F	Drinking Water	-	-	-	1613B (TCDD) [1.]	1613B (TCDD)	1613B (TCDD)	1613B (TCDD)	1613B (TCDD)	-
	Non-Potable Water	1613B, 8290A	1613B, 8290A	1613B, 8290A	1613B	1613B	1613B (TCDD)	1613B	1613B	1613B, 8290A
	Soil/Sediment/Solid	1613B, 8290A	1613B, 8290A	1613B, 8290A	8290A	-	8290A	8290A	8290	1613B, 8290A
	Biota/Tissue	1613B, 8290A	-	-	-	-	-	-	-	-
	Stack/Ambient Air	M23, 0023A/ 8290 TO-9A	-	-	M23, 0023A, TO-9A	M23	-	-	TO-9A	-
PCB	Soil/Sediment/Solid	1668A&C	-	1668	1668A	1668A/C	1668A/C	1668	1668A/C	1668C
	Non-Potable Water	1668A&C	-	1668	1668A	1668A/C	1668A/C	-	1668A/C	1668C
	Stack/Ambient Air	TO-4A	-	-	TO-4A	-	-	-	-	-
	Biota/Tissue	1668A&C	-	-	-	-	-	-	1668A/C	-
PAH	Stack/Ambient Air	TO-13A	-	-	TO-13A	-	-	-	-	-
BDPE	Non-Potable Water	1614A	-	-	1614	-	-	-	-	-
	Soil/Sediment/Solid	1614A	-	-	1614	-	-	-	-	-
OCP	Soil/Sediment/Solid	mod 1699	-	-	-	-	-	-	-	-
	Ambient Air	TO-4A	-	-	TO-4A	-	-	-	-	-
VOC-VOST	Stack/Ambient Air	5041A/8260C	-	-	-	-	-	-	-	-
SVOC	Soil & Chem/Stack	8270	-	-	8270D	-	-	-	-	-
ICPMS Elements	Stack/Ambient Air	M29 & 0060/6020A	-	-	M29 & 0060/6020A	M29 (Pb)	-	-	-	-
	Soil/Sediment/Solid	6020A	-	-	-	-	-	-	-	-
Mercury	Stack/Ambient Air	M29/101A, ASTM D6784	-	-	M29/101A, ASTM D6784	-	-	M101A, 7470A	-	-
Acid Gases (HF, HCl, HBr)	Stack Air	M26, M26A, 9057	-	-	M26, M26A, 9057	-	-	-	-	-
Acid Gases (Cl_2, Br_2)	Stack Air	M26, M26A, 9057	-	-	M26, M26A	-	-	-	-	-
Ammonia	Stack Air	CTM-027	-	-	CTM-027	-	-	-	-	-
Particulate	Stack Air/Ambient	M5, M5D, M202	-	-	M5, M5D	M5	-	M5, M5D, M17, M202	-	-

Accrediting Body: / Accreditation: / Accrediting Standard		GA EPD NELAP 2nd^ary TNI:2009	MI EGLE NELAP 2nd^ary TNI:2009	HI DOH NELAP 2nd^ary TNI:2009
Target Analytes	**Matrix**	**Accreditations by Method**		
PCDD/F	Drinking Water	1613B (TCDD)	1613B (TCDD)	1613B (TCDD)

[1.] For Drinking Water 1613B NJ DEP is the ALS primary accrediting body

TNI:2009 = The current lab accreditation standard of The NELAC Institute (TNI)
NELAP = US National Environmental Laboratory Accreditation Program
US DoD = US Department of Defence
LA DEQ = Louisiana Department of Environmental Quality
AK DEC = Alaska Department of Environmental Conservation
FL PHL = Florida Dept of Health, Bureau of Public Health Laboratories
GA EPD = Georgia Environmental Protection Division
HI DOH = Hawaii Deptment of Health
MI EGLE = Michigan Department of Environment, Great Lakes and Energy
NJ DEP = State of New Jersey Department of Environmental Protection
NY DOH = State of New York Department of Health
PA DEP = State of Pennsylvania Department of Environmental Protection
TN DEC = Tennessee Department of Environmental Conservation
TX TCEQ = State of Texas Commission of Environmental Quality
VA DGS = Commonwealth of Virginia Department of General Services
WV DEP = West Virginia Department of Environmental Protection

4.0 Facilities and Instrumentation

ALS Burlington occupies approximately 27,000 square feet of laboratory and office space in state-of-the-art facility in Burlington Ontario Canada. Administrative support (including purchasing, invoicing, financial, HR and IT) are provided from our corporate locations in North Vancouver BC and Edmonton AB. The laboratory has approximately 650 linear feet of benching workspace, 220 linear feet of which is hooded & ventilated to remove toxic and noxious materials.

Major Analytical Instrumentation:

LC & GC/MSMS#1	Waters XEVO-TQ-XS With Agilent 8890 GC With Atmospheric Pressure Ionization (API) & With CTC PAL 3 Autosampler With Acquity UPLC Software: MassLynx 4.2
GC/MSMS #8	Agilent 7010 Triple Quad With Agilent 7890B GC With PAL RSI Autosampler Software: Masshunter B.07.03
GC/HRMS #5, 6, 7, 9, 10	Waters AutoSpec Premier With Agilent 7890B With CTC PAL GC-xt Autosampler Software: Masslynx 4.1
GC/LRMS #1, 2, 3 & 4	Agilent 5977B (x1) & 5975 (x3) MSDs 2 with 6890N GC, 2 with 7890 GC 3 with Agilent 7683B Series Autosampler Software: Masshunter 10.2
VOST Trap Conc.	1 x Perkin Elmer 650 ATD
ICPMS#1	Agilent 7800 With SPS4 Autosampler Software: Masshunter 4.4
CVAA	CETAC With Autosampler Software: Quicktrace 3.0.0
IC	Dionex 2100 Dionex 1100 With AS Autosampler Software: Chromeleon 7.3

GPC	Gilson GX-271 GPC with UV detector and liquid handler
Metals Microwaves	CEM MARS6 Digestion System CEM MARS5 Digestion System

LIMS Resources:

Local Server	HP Proliant DL360e GEN8
LIMS Hard/Softwares	ALS Canada network customized EvoLIMS software with Servers Centralized in Edmonton and Vancouver

5.0 Key Staff Qualifications & Experience

ALS Life Sciences, Burlington operations, is comprised of approximately 40 staff dedicated to provide quality analytical services. Staff members holding key positions are listed below but absent from this table is the core of the skilled bench prep analysts. In addition, ALS Burlington is supported and strengthened by ALS Canada corporate both technically and administratively with Accounts Payables, Accounts Receivables, Purchasing, Health & Safety, Compliance, Corporate Quality Control, Technical Analytical, Information Technology and Human Resources teams coordinated throughout the extensive ALS Canada network.

Key Staff Member	Position	Years of Analytical Lab Experience	Education Primary - Deg/Dipl	Institution/Specialty
Ron McLeod	Business Dev. & Tech. Director	35	Ph.D., B.Sc.	McMaster/ Chem.
Farhad Khalili	General Manager	13	MASc&Eng, B.Sc	Regina/Science & Eng
Stephen Kennedy	Technical Manager	31	B.Sc.	Victoria/Chem
Phil Elder	Inorganics Manager	7.9	Ph.D., B.Sc.	McMaster/ Chem.
Alastair Blythe	Client Service Manager	27	Dipl.	Lambton/Env.Tech.
David Gurdibaniuk	Quality Manager (National)	10	B.Sc.	Manitoba/Biochem.
Cameron McIntosh	Quality Systems Coord.(Local)	7.3	B.Sc.	Guelph/Physical Sci.
Ancy Sebastian	Sales Representative	32	Dipl.	Sheridan/Chem.Tech.
Brad Reimer	Technical Lead GC/HRMS	34	B.Sc. (partial)	McMaster/ Chem.
Mark McHugh	Supervisor Organic Prep	11	Dipl.	Mohawk/Env.Tech.
Marco Michetti	Team Lead Organic Prep	6.7	B.Sc.	Laurier/Chem
Ella Gdyczynski	Senior Analyst	38	Dipl.	Mohawk/Chem Eng
Todd Patterson	GC/HRMS Operator	11	B.Sc.	McMaster/Life Sci
Edwin Sabjic	GC/HRMS Operator	8.6	B.Sc.	Waterloo/Science
Nilmini Vithanage	GC/MSMS Operator	9.8	Ph.D., B.Sc.	Maine/Chem.
Niloufar Ashtari	GC/HRMS Operator	6.9	M.Sc.,B.Sc.	Manitoba/Bio
Katherine Berg	GC/HRMS Operator	5.3	Dipl.	Mohawk/Biotech.
Sabrina Jin	GC/MS/MS Operator	29	Dipl.	Mohawk/Chem. Eng.
Andrew Reid	GC/MS Operator	12	Dipl	Centennial/Bio. Tech.
Gamini Nadu Kankar	IC Operator	6.5	M.Sc, B.Sc	Gujarat/Chem.
Amish Bhavsar	CVAA Operator	9.7	M.Sc, B.Sc	Maine/Chem.
Sabir Ahmed	ICPMS Operator	13	Dipl.	Mohawk/Env.Tech.
Aaron Burton	Sample Receiving	8.5	Dipl.	Mohawk/Env. Tech.
Claire Kocharakkal	Client Service Rep	3.6	B.Sc.	Queens/Biology
Breanne Dusureault	Client Service Rep	2.9	B.Sc.	McMaster/Env. Sci.
Lynne Wrona	Client Service Rep	12	M.Sc, B.Sc	McMaster/ Biochem.

The individual Quality Control staff members in each ALS Canada laboratory reports independent of the local laboratory management and directly through to David Gurdibaniuk (in Winnipeg MB) with over 4 years of experience in Laboratory and Quality Management.

Technically ALS Burlington is led by Dr. Ron McLeod and Stephen Kennedy with a combined >65 years of lab management experience within the analytical services industry.

Ron McLeod; Director, Air Toxics & Special Chemistries, Eastern Canada Division.
Ph.D. in Organic Chemistry

With over thirty years of experience in the environmental laboratory business all in senior positions with Zenon Environmental Laboratories, PSC Analytical, Axys Analytical and now with ALS. Prior positions have included Chief Operations Officer (Axys Analytical), General Manager (PSC Analytical), Client Services Manager and Principal Scientist (PSC Analytical/Zenon Environmental Laboratories). Ron is a recognized expert in Air Toxics and HRMS methods.

Stephen Kennedy: Technical Manager (Burlington)
B.Sc. in Chemistry

Steve has been a key member ALS-Burlington since its inception in 2005. First as the Organic Laboratory Manager, and currently as the Technical Manager, he currently oversees the daily operation of the laboratory ensuring that quality data are reported on-time, and that performance targets are met, through supervision and guidance. Steve has over twenty-five years of experience in environmental laboratory operations predominantly in managerial positions. He is an expert on HRMS methodologies and instrumentation and lends his knowledge to method development/improvement. Steve's experience and positions have placed him in the forefront in the development of emerging HRMS methods such as: 1668 (209 congener analysis of PCB), draft method 1614 (brominated diphenyl ethers), organochlorine pesticides, bromochlorodioxins/furans and chlorinated naphthalenes.

6.0 Selected Project Histories

6.1 Agricultural Products, Supplements and Tissues Testing:

6.1.1 National Chemical Residue Monitoring Program (NCRMP) and Food Action Safety Plan (FSAP)

For the Canadian Food Inspection Agency (CFIA); the analysis of approximately 50 food samples per month for PCDD/PCDF, PCB congeners, BDPE and/or PAH via HRMS. Initially contracted 2007 to 2010, now re-newed through March of 2021.

6.1.2 QC Monitoring Programs- Feeds, Foods and Supplements:

For many clients, ALS Burlington monitors products and/or raw materials for routine QC programs to ensure compliance with control or regulatory limits for contaminants of concern such as PCDD/PCDF, PCB congeners, total PCB, PAH, trace metals and/or pesticides. These monitoring programs cover products such as feeds, feed additives, foods, food additives, edible oils and nutritional supplements etc. Currently ALS Burlington handles some 50 samples per week on such monitoring programs.

6.2 Air Toxics - Stack:

6.2.1 Ontario Electrical Utilities Testing:

For 2006 through 2016, in association with ORTECH Environmental as samplers/consultants; the analysis of the Ontario Power Generation's utilities stack source emissions at Lambton, Thunder Bay, Nanticoke and Bruce (Western Waste Management Facility), for PCDD/PCDF/PAH/PCB (M23 combined with other semi-volatiles), metals/particulates (M5/M29), VOC (VOST) and acid gases.

6.2.2 Covanta Waste Management:

Since 2017 and in partnership with testing firms such as TRC and Ortech, ALS has been providing analytical services for scheduled monitoring of SVOCs (e.g. PCDD/PCDF & PCB) metals/particulates (M5/M29), VOC (VOST), acid gases and aldehydes for Covanta operated northeastern plants such as Niagara, Springfield, Pittsfield, Camden, Seconn, Del Valley, Pasco, Bristol, Haverhill and Durham/York (ON).

6.2.3 US EPA Information Collection Retrieval (ICR) Programs:

- **Utilities Industry:**

ALS Burlington analyzed samples from 15 sources for three major stack testing firms in the spring of 2010. Stack sample analyses included PCDD/PCDF/PCB congeners via M23, SVOC via 0010/8270D, multi-metals via M29 and VOC via 0031/5041A/8260B.

- **Tile Industry:**

ALS Burlington analyzed samples from 15 sources in the summer of 2010. Stack sample analyses included PCDD/PCDF via M23 and multi-metals via M29.

- **Petroleum Sector:**

ALS Burlington analyzed samples from 8 sources for three major stack testing firms in the summer of 2011. Stack sample analyses included PCDD/PCDF/PCB congeners via M23, SVOC via 0010/8270D, multi-metals via M29 and VOC via modified method 18.

6.2.4 Jacobs/Velsicol Superfund Site:

Since March of 2018 and during thermal soil treatment, ALS Burlington has been monitoring weekly the thermal treatment gaseous influents and effluents for PCB and OC Pesticide emissions using GC/MS and via an ALS custom project designed solid sorbent sampling system.

6.3 Air Toxics - Ambient:

6.3.1 Woods Buffalo Environmental Association (WBEA):

WBEA is collaboration of communities, environmental groups, industry, government and Aboriginal stakeholders that runs a major ambient air monitoring program in the Alberta Athabasca Oil Sands (i.e. Woods Buffalo area in north eastern Alberta). From January 2009 through December of 2014 WBEA contracted ALS for the monitoring of PM2.5/PM10 particulates (gravimetric), anions/cations (IC) and metals (ICPMS) captured on 47mm Teflon filters from 8 ambient air monitoring stations.

6.3.2 Xstrata Copper:

For Xstrata's routine ambient air monitoring program at the Kidd Metallurgical Site, ALS has been contracted to analyze HiVol quartz filters for PM and metals on HiVol filters. [since 2006, renewed annually through 2021]

6.4 General Environmental Testing:

6.4.1 Dow Chemical Company/Ann Arbor Technical Services:
For the 2007 and 2008 seasons, the characterization of the PCDD/F contamination within the Tittabawassee River floodplains downstream of Dow's Midland operations - the rush analysis of approximately 4400 soils/sediments for PCDD/F contamination.

6.4.2 Conservation Ontario/Ontario Ministry of the Environment:
Characterization of trace environmental contaminants in background Ontario river sediments. HRMS analysis of 339 sediments for PCDD/PCDF. PCB congeners, BDPE, PCN, & OC Pesticides [initial contract from 2009-2010; renewed inclusive through 2016].

6.4.3 Da Nang (Viet Nam) Airport Remediation Phase 1 and 2:
The project involved the International remediation effort of the Agent Orange contaminated Da Nang airport site through support from USAID. Terratherm (now Cascade Thermal) was the source of the remediation technology and required rush analysis of process waters, ambient and stack emissions for PCDD/F quantification. Weekly and for approximately 3½ years ending late 2017, approximately 10 samples were shipped for analysis. For Phase 1, data was reported within 1 week of sample receipt in ALS Burlington. For the second half of the project, Phase 2, data was reported to the client within 4-5 working days from the shipment date in Viet Nam.

6.5 Blood & Blood Product Testing:

6.5.1 University of Alberta:
Development of HRMS analyses of a broad range of common pesticides (organophosphorus pesticides, triazines, phenoxy acid herbicides, phenolic metabolites, pyrethroids and carbamates) from human blood serum. Analysis of 31 pooled blood samples for the same broad list of pesticides [April 2007].

6.5.2 Alberta Centre for Toxicology:
ALS Burlington has been contracted for analytical services for a Canadian Health Measurements Survey a comprehensive bio-monitoring study on Canadian population. In the current 2014 to 2016 program, blood serum is being analyzed by ALS for PCDD/PCDF, PCB congeners, BDPE congeners and organochlorine pesticides all via GC/HRMS.

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Calgary, AB, Canada T1Y 7B5
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SCOTT PRESTON

Director, Eastern Canada Operations, <1 Year
ALS Waterloo

With over two decades of industry experience in multi-national consulting and analytical testing spaces, Mr. Preston brings a significant level of market knowledge gained through the pursuit and execution of solutions for major clients in multiple sectors. With a focus on strategic business development, Mr. Preston is responsible for business growth, diversification, and expansion within Eastern Canada. As the Director of Eastern Canada Operations, he has accountability for the overall performance of the business, including safety, quality, and service.

PREVIOUS EXPERIENCE

Vice President, National 2018 -2021
AGAT Laboratories, Halifax, NS

Member of executive team responsible for managing services across Canada, including direct responsibility for development of national initiatives to enhance success in the pursuit and execution of client programs.

General Manager, Atlantic Canada 2013 - 2018
AGAT Laboratories, Halifax, NS

Direct accountability for the overall performance of the business including safety, quality, and service, resulting in significant growth and expansion of laboratories and services. Maintained responsibility for a selection of major projects.

Head of Business Operations, Nova Scotia 2010-2013
AMEC Earth and Environmental, Halifax, NS

Managed the day the day operations of the consulting business in Nova Scotia, including services in Geotechnical and Materials Engineering, as well as Environmental Engineering and Sciences.

Site Assessment Lead, 2004-2010
AMEC Earth and Environmental, Goose Bay Labrador

Project Manager, Client Liaison, and Site Assessment Lead for the $300M Goose Bay Remediation Project.

EDUCATION

Laurentia University – Continuing Education, 2008 to 2010

Strategic Relationship Management, 2008

Canadore College – Environmental Management, 2000

AWARDS & ACHIEVEMENTS

President, Environmental Services Association Maritimes, 2013-2018

Business Leaders Roundtable, Halifax Partnership, 2013-2015

Technical Excellence Award, AMEC, 2009

Client Service Award, 2008

Superior Leadership, 2007

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: ABRAHAM KUOL TITLE: Laboratory Analyst

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
BSc	University of Guelph 50 Stone Road East Guelph, Ontario, Canada N1G 2W1	2013	Biological and Pharmaceutical Chemistry

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
University of Guelph, Environmental Engineering Department 50 Stone Road East Guelph, Ontario, Canada N1G 2W1	June 2014	June 2015	**Research Assistant** -Collected wastewater samples from the field, Guelph Wastewater Treatment Plant (WWTP). - Analyzed samples Using organic carbon analyzer (TOC), Chemical Oxygen Demand reactor (COD), pH meter and Mastersizer equipment

ALS Environmental (Waterloo) 60 Northland Road, Unit 1, Waterloo ON N2V 2B8	Sept 2017	Feb 2022	Air Quality Laboratory Analyst 1 (2017-2019) -Prepared air samples and standards as outlined in the SOPs -Help clients when they experienced issues with our equipment while sampling in the fields -Analyzed air samples using GCMS-FID VOC Laboratory Analyst 2 (2019-2022) - Processing, reviewing and reporting data to Excel and LIMS. · Ensure that the Hold Times and Turn around Times are met by reporting data on timely manner. · Making sure that the right methods run on the instruments with updated calibration curves. · Strictly follow ALS QA/QC protocols on data analyses and how to handle samples according to the SOPs. · Making standards and preparing samples following the SOPs guidelines.
ALS Environmental (Burlington) 1435 Norjohn Court, Unit 1, Burlington ON L7L 0E6	March 2022	Present	Instrumentation Analyst (AN4) -Troubleshoot and do routine maintenance on HRMS Instrument. -Process, review and report data in timely manner. -Make standards following ALS SOPs and QC guidelines.

Resumes – Burlington
ALS Environmental
1435 Norjohn Court, Unit 1
Burlington, ON L7L 0E6

NAME: Todd Patterson TITLE: Laboratory Analyst (HR GC-MS)

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
University	McMaster University	2000	Hon. BSc

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	Jul 2014	Present	Laboratory Analyst: High-Res GC-MS
Apotex Inc. Mississauga, ON	Apr 2012	Jul 2014	Technician, Quality Assurance
City of Hamilton, Hamilton, ON	Feb 2010	Feb 2011	Contract Lab/Field Technician
City of Hamilton, Hamilton, ON	Oct 2009	Jan 2010	Contract Laboratory Assistant
City of Hamilton, Hamilton, ON	Apr 2008	Oct 2009	Contract Inorganic Lab Technician
Maxxam Analytics Mississauga, ON	Feb 2005	Apr 2008	Volatiles Lab Analyst II
Maxxam Analytics Mississauga, ON	Jan 2002	Feb 2005	Volatiles Lab Analyst I

Maxxam Analytics Mississauga, ON	Sep 2001	Jan 2002	Organic Lab Technician
McMaster University Hamilton, ON	Sep 2000	Apr 2001	Microbiology Lab Assistant (Ecology of Inland Waters)

Resumes – Burlington
ALS Environmental
5420 Mainway Drive, Unit 5
Burlington, ON L7L 6A4

NAME: Steve Kennedy TITLE: Organic Instrument Manager

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
College	University of Victoria	1990	BSc Chemistry

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	Dec 2010	Present	Laboratory Manager
ALS Environmental Burlington, ON	Apr 2005	Dec 2010	Organic Laboratory Manager
Axys Analytical Services	Oct 2002	Mar 2005	Technical Specialist
Seakem/Axys Analytical Services	Jul 1990	Aug 2001	Analyst, Instrument Lab Manager

Resumes – Burlington

ALS Environmental
5420 Mainway Drive, Unit 5
Burlington, ON L7L 6A4

NAME: Alastair Blythe TITLE: Client Services Manager

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
College	Lambton College	1996	Environmental Technology

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	Jun 2010	Present	Client Services Manager
ALS Environmental Burlington, ON	Mar 2005	Jun 2010	Organic Preparation Supervisor
Axys Analytical Services Sydney, BC	Oct 1997	Feb 2005	Sample Preparation Supervisor
Lambton College, Sarnia, ON	Jun 1994	Jun 1996	Laboratory Technician

Resumes – Burlington
ALS Environmental
5420 Mainway Drive, Unit 5
Burlington, ON L7L 6A4

NAME: Ron McLeod

TITLE: Director, Air Toxics & Special Chemistry; Eastern Canada

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
University	McMaster University	1983	Ph.D. Organic Chemistry
University	McMaster University	1975	B.Sc. Pure Chemistry

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	2005	Present	Director, Air Toxics Division
Axys Analytical Services Sidney, BC	2002	2004	Chief Operations Officer
Philip Analytical Services Corp Burlington, ON	2000	2002	General Manager
Philip Analytical Services Corp (formerly Zenon) Burlington, ON	1995	2000	Principal Scientist/Client Services Manager
Zenon Environmental Laboratories Burlington, ON	1986	1995	Lab Section Head/Project Manager
Solarchem Research Toronto, ON	1986	1986	Manager Synthetic Chemistry
Solarchem Research Toronto, ON	1985	1986	Research Scientist
McMaster University Hamilton, ON	1983	1985	Post-Doctoral Fellow

Resumes – Burlington
ALS Environmental
5420 Mainway Drive, Unit 5
Burlington, ON L7L 6A4

NAME: Bradley Reimer TITLE: GC/HRMS Team Leader

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
University	McMaster University	1990	Chemistry (deg. incomplete)

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	Jun 2007	Present	GC/HRMS Team Leader
PSC Analytics / Maxxam Analytics	Oct 2000	Jun 2007	GC/HRMS Senior Analyst
Chromatographic Specialties	Nov 1996	Oct 2000	Technical Sales Representative
Mann Testing/Novamann/Maxxam Analytics	Nov 1987	Oct 1996	Food Science Analyst

Resumes – Burlington
ALS Environmental
5420 Mainway Drive, Unit 5
Burlington, ON L7L 6A4

NAME: Edwin Sabljic TITLE: GC/HRMS Intr. Operator

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
University	University of Waterloo	2011	B.Sc. Science

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	2013	Present	GC/HRMS Operator
Environment Canada	2010	2010	Co-Op Term as Analytical Chemist
Iogen Corp	2008	2008	Co-Op Term as Technician

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: Andrea Reinhard TITLE: Instrument Operator

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
Diploma	Mohawk College	2017	Biotechnology- Health
Advanced Diploma	Mohawk College	2018	Biotechnology- Advanced

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental (Burlington)	2018	2018	Laboratory Assistant
ALS Environmental (Burlington)	2018	Feb 2022	Laboratory Analyst
ALS Environmental (Burlington)	Feb 2022	Present	Instrument Operator

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: Andrew Reid TITLE: GC/MS Operator

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
College	Centennial College	2012	Biotechnology Technologist-Industrial Microbiology
College	Centennial College	2009	General Arts and Science-Science Diploma

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	Oct 2016	Present	GC-MS Operator -Analyze SVOCs by GC-MS as well as Volatiles by VOST -Develop GC-MS methods
Exova Environmental Mississauga, ON	May 2016	Oct 2016	Supervisor/Laboratory Analyst -Supervised Sample Reception/Instrumentation -Extracted and analyzed samples by P&T-GC-MS, GC-FID and GC-ECD -Carried out maintenance and repairs on all instruments.

Exova Pharmaceutical Mississauga, ON	April 2015	May 2016	R&D Chemist-Organics (GC-MS/LC-MS) -Provided contract Pharmaceutical development -Developed methods and Analyzed samples for a wide range of VOCs and SVOCs as well as pharmaceutical products by GC-MS, GC-FID and LC-MS
Exova Environmental Mississauga, ON	March 2014	April 2015	Supervisor/Laboratory Analyst -Supervised Sample Reception/Instrumentation -Extracted and analyzed samples by P&T-GC-MS, GC-FID and GC-ECD -Carried out maintenance and repairs on all instruments
AGAT Laboratories Mississauga, ON	Feb 2011	March 2014	Senior Chemist/P&T-GC-MS-FID/LC Operator -Extracted and Analyzed Volatile samples by P&T-GC-MS -Analyzed samples by LC -Developed P&T-GC-MS methods -Carried out maintenance and repairs on purge and trap systems as well as the GC-MS systems

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: Breanne Dusureault TITLE: Accounts Manager

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
University	McMaster University	2014	Bachelor's Degree Geography and Environmental Studies with Minor in Environmental Science
College	Sheridan College	2016	Post-Graduate Diploma Environmental Control

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	Nov 2018	Present	ACCOUNTS MANAGER Communicated with clients; managing accounts, creating invoices & reports, ensuring compliance to environmental regulations

Region of Peel Brampton, ON	Sept 2016	Aug 2017	PROGRAM COORDINATOR Coordinated the Community Lead Testing Program & Distribution Water Study; - Scheduled sampling appointments collecting data & creating reports, ensuring compliance to environmental standards - Collected and tested water samples in field for Distribution Water study

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: Cameron McIntosh TITLE: Quality Systems Coordinator

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
	University of Guelph	2018	BSc Physical Science Minor Physics

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Waterloo, Ontario	2020	Current	Quality Systems Coordinator. Responsible for several lab's quality systems, including auditing, document control, proficiency testing, corrective action reports, and method validation authorizations.
ALS Environmental Waterloo, Ontario	2018	2020	Independent environmental chemistry analysis and prep. Lead prep and analyst for several inorganic methods.
Gay Lea Foods Guelph, Ontario	2017	2017	QA analyst. Conducted production audits and performed various chemical testing on food products and ingredients.
Chapman's Ice Cream Markdale, Ontario	2014	2016	QA technician. Performed various chemical and micro testing on food products and ingredients.

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: Claire Kocharakkal TITLE: Acting Client Services Team Lead

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
University	Queen's University	2017	BSc (Hons), Major in Biology

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	Jun 2022	Present	Acting Client Services Team Lead
ALS Environmental Burlington, ON	Apr 2018	Jun 2022	Project Manager

David J. Gurdibaniuk

1329 Niakwa Road East, Unit 12 | Winnipeg, MB R2J 3T4 | +1 204 255 9720

Education

University of Manitoba
Winnipeg, MB
Honors Bachelor of Science, Biochemistry, 2013

Testing Experience

Asbestos
Toxicology
Microbiology
Microscopy
Biochemistry

Presentations

QC Practices – Building Quality into Every Test Result
– ALS 2022 Webinar Series

National Quality Manager

2021 – Present

This position supervises the ALS Canada Environmental Quality Department, and is responsible for leading the development and implementation of a national Quality System compliant with the requirements of ISO/IEC 17025, ALS policies, applicable regulations and recognitions, and meeting specific program requirements of CALA, TNI, U.S. DOD and various U.S. State accreditation agencies.

A primary focus of the department is ensuring the quality of microbiology, biology, chemistry, microscopy, and toxicology test results through method validation, evaluating on-going test method performance, establishing authorized protocols, and auditing for implementation and compliance.

David is also an assessor for the Canadian Association for Laboratory Accreditation (CALA) to assess the conformance of laboratories to ISO/IEC 17025.

Previous Experience

ALS Environmental — **Biology Manager, '20 – '21**
Winnipeg, Manitoba

Responsibilities: Managed the overall operation of the Biology area which encompasses Limnology, Industrial Hygiene and Microbiology analyses and responsible for the staff compliance to quality and safety.

ALS Environmental — **Quality System Coordinator, '18 – '20**
Winnipeg, Manitoba

Responsibilities: Responsible for organizing and maintaining the Proficiency Testing program, updating and maintaining documents under the document control and distribution systems, ensuring quality control acceptance criteria was in place for all local tests, and creating and maintaining control charts. Also in charge of maintaining and performing internal audits of test methods as well as tracking, reviewing, and approving method validations and revalidations, and reviewing and monitoring the non-conformances and corrective actions to issues found in the lab. This position also scheduled and organized reports for Management Reviews and maintained records of subcontract lab test qualifications.

ALS Environmental — **Biology Analyst, '13 – '18**
Winnipeg, Manitoba

Responsibilities: Completed data review and approval, ordering supplies and training new analysts and lab assistants. In the Microbiology area, David was responsible for performing and analyzing Cryptosporidium and Giardia, Legionella, and other bacteriological tests including HPC, Membrane Filtration, and Colilert methods. In the Limnology area, David was responsible for Air and Bulk Asbestos testing, Toxicity tests and Mold sample preparation.

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: Elzbieta Gdyczynski TITLE: GC/HRMS Operator

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
College	Mohawk College,Hamilton, ON	1983	Diploma; Chemical Engineering

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	January 2005	Present	GC/HRMS Operator
Maxxam Analytics, Burlington, ON	Sep 2004	Jan 2005	GCMS Senior Analyst
Philip Environmental –PSC Analytical, Burlington,ON	1997	Sep 2004	GCMS Analyst
ZENON Environmental Burlington,ON	1984	1997	Organic prep

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: Katherine Berg

TITLE: Laboratory Analyst

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
	Mohawk College	2016	Biotechnology - Health,

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
Laboratory Analyst, ALS Environmental, 1435 Norjohn court, Burlington, ON, L7L 0E6	2017	2021	sample digestion, liquid-liquid extractions, solid-liquid extractions, column chromatography, Preparation of reagents and reference materials for analysis
Laboratory Technician, Carmeuse Lime & Stone, 600 ON5, Dundas, ON, L9H 5E2	2016	2017	Laboratory equipment calibration comprised of the Leco CS200, Leco CS230, and analytical and top loading balance. Process testing includes burette density, LOI (loss on ignition), percent moisture, fuel grinds, lime/limestone gradations, %$C0_2$, %S and various chemical elements analyzed using the XRF Spectrometer S4 Explorer

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: Mark McHugh TITLE: Supervisor Organic Prep

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
College	Mohawk College of Applied Arts and Technology	2010	Environmental Technology Diploma

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	Sept 2018	present	Supervisor Organic Prep
ALS Environmental Burlington, ON	March 2015	Sept 2018	Team Lead, Organic Prep
ALS Environmental Burlington, ON	Feb. 2011	March 2015	Lab Analyst
ALS Environmental Burlington, ON	Sept. 2010	Feb. 2011	Lab Assistant

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: Michael Challis TITLE: Senior Project Manager

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
Honours B.Sc	University of Guelph	1988	Specialized Applied Chemistry
Diploma	Mohawk College	1985	Chemical Engineering Technology

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental, 1435 Norjohn Crt. Burlington, ON	2022	--	Senior Project Manager
Sheridan College, 7899 McLaughlin Road, Brampton, ON	2020	--	Partial Load Chemistry Professor, Faculty of Applied Science and Technology
AGAT Laboratories, 5835 Coopers Ave. Mississauga, ON	2017	2019	General Manager – Ontario Environmental
Bureau Veritas (Maxxam), 6740 Campobello Rd. Mississauga, ON	1986	2015	Customer Service Manager/Business Development Manager (US Sales)

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: Nilmini Vithanage TITLE: Instrumentation Analyst II

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
University	University of Ruhuna, Matara, Sri Lanka	2000	BSC in chemistry
University	University of Maine, Orono, ME 04468, USA	2011	PhD in chemistry
College	Academy of Applied Pharmaceutical Sciences, North York, ON	2017	Diploma in Quality control and quality assurance in pharmaceutical sciences

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	July 2018	Present	Instrumentation Analyst II in HRMS department
Eurofins Experchem, North York, ON	Nov 2017	April 2018	Co-op in R&D and QC laboratories
Biorefining Research Institute, Lakehead University, Thunder Bay, ON	Jan 2012	Aug 2016	Research Associate – product development and testing, proposal writing,
Department of Chemistry, University of Maine, Orono, USA	Aug 2006	Dec 2011	Graduate Student and Teaching Assistant in Chemistry
Rubber Research Institute of Sri Lanka, Dartonfield, Agalawatta, Sri Lanka	Nov 2001	Aug 2006	Biochemist

University of Ruhuna, Matara, Sri Lanka	Aug 2000	Oct 2001	Assistant lecturer in Chemistry

ALS Environmental
1435 Norjohn Court #1
Burlington, ON L7L 0E6

NAME: Aaron Burton TITLE: Login Coordinator

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
College	Mohawk College	2010	Environmental Technician

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	2013	Present	Login Coordinator
Tim Hortons Ancaster, ON	2006	2013	Supervisor/Baker

ALS Environmental
1435 Norjohn Court #1
Burlington, ON L7L 0E6

NAME: Lynne Wrona TITLE: Account Manager

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
University	McMaster University	1982	MSc. Biochemistry
University	McMaster University	1979	Honours BSc. Biochemistry

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	2009	Present	Account Manager
McMaster University Hamilton ON	1982	1986	Research Assistant
Hamilton Region Conservation Authority-Regional Laboratory Hamilton ON	May 1978	Aug 1978	Lab Assistant/Environmental Sampler

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: Minoo Sharifi-Far TITLE: Site Safety and Quality Admin

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
Honours BSc	University of Toronto	2018	Science (Biology and Anthropology)

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
Natural Insect Control (Fort Erie)	2018	2020	Various tasks involved in the production of Nematodes including inoculation and transfer of hosts.
E3 Laboratories (Niagara-on-the-Lake)	2020	2022	Wastewater analysis (Chloride, Fluoride, Sulfate, Sulfide, TRC etc.)
ALS Environmental (Burlington)	2022	Present	Induction training, documentation release, maintaining accreditations, PT sample login and reporting.

Resumes – Burlington
ALS Environmental
1435 Norjohn Court
Burlington, ON L7L 0E6

NAME: Sabrina Gin TITLE: Laboratory Analyst (HR GC-MS)

EDUCATION

	Institution	Year Graduated	Degree and Major Area of Study
College	Mohawk College	2012	Diploma in Chemical Engineering

EXPERIENCE

Laboratory and Address	Date Employed From	To	Duties
ALS Environmental Burlington, ON	Aug 2012	Present	GCMS Operator
CDM DEV, Cambridge, ON		2011	EHS Technologist
Water Resource Protection Bureau Chanchun China	1992	2007	Senior Analyst

1435 Norjohn Court, Unit 1, Burlington, ON, Canada L7L 0E6

SVOC DATA PACKAGE

Client Project Information

Project ID:
Project Description:
Contact:

ALSE Project Information

Project ID:

Contact:
Submission ID(s):

Final Package Review by: _____

Date Reviewed: 30-Jun-17

1435 Norjohn Court, Unit 1, Burlington, ON, Canada L7L 0E6

SVOC DATA PACKAGE

SECTION 1: PROJECT NARRATIVE

ALSE Project Information

Project ID:

Contact:

Submission ID(s):

Client Project Information

Project ID:

Project Description:

Contact:

Analytical Method: PCB Congeners by EPA 1668C

ALS Sample ID	Client Sample Descriptions	Matrix	Date Sampled	Date Received	Date Extracted	Date Analyzed
L1931034-1		Solids	27-Apr-17	23-May-17	19-Jun-17	26-Jun-17
L1931034-2		Solids	08-May-17	23-May-17	19-Jun-17	26-Jun-17
L1931034-3		Solids	08-May-17	23-May-17	19-Jun-17	26-Jun-17
WG2539476-4	Duplicate	QC	n/a	n/a	19-Jun-17	26-Jun-17
L1931034-4		Solids	08-May-17	23-May-17	19-Jun-17	23-Jun-17
L1931034-5		Solids	08-May-17	23-May-17	19-Jun-17	23-Jun-17
WG2539476-1	Method Blank	QC	n/a	n/a	19-Jun-17	26-Jun-17
WG2539476-2	Laboratory Control Sample	QC	n/a	n/a	19-Jun-17	22-Jun-17
WG2539476-5	Matrix Spike	QC	n/a	n/a	19-Jun-17	22-Jun-17
WG2539476-6	Matrix Spike Duplicate	QC	n/a	n/a	19-Jun-17	22-Jun-17

Comments and Notes:

a) Sample Integrity:
The samples were received in good condition at 23.8 degrees C.

b) Sample Preparation
The samples were mixed with sand and spiked with 13C12-labelled extraction standard before toluene extraction via Soxhlet/Dean-Stark. The extract was spiked with 13C12-labelled cleanup standard and prepared for analysis by column chromatography using acidified silica and alumina.
The extracts were reduced in volume, and spiked with 13C12-labelled injection standard prior to analysis by GC/HRMS

The method blank (WG2539476-1) consists of sodium sulphate (ALS Lot# 1551) in sand, and was processed in the same manner as the samples, described above.

c) Instrumental Analysis:
All results have been reported on an as-received (wet weight) basis.

Sample calculation of Estimated Maximum Possible Concentration (EMPC) in the case of failure of the ion abundance ratio criterion: When the ion abundance ratio criterion is not met, the situation is described as "Not Detected due to Ratio" (NDR). Such results are flagged on a report as "NJ". NDR results are a calculated EMPC, which is a worst-case concentration calculated by supposing that the ion which is too high is affected by an interference. The NDR calculation adjusts this ion's peak area to a lower extrapolated value based on the theoretical ion abundance ratio and the area of the other ion, and then calculates the EMPC from the extrapolated area added to the "correct" ion's area by performing the calculation for a positive result. See the entry in this data package entitled "Sample Calculation Report - EMPC" for an example of this correction.

For the dichlorobiphenyls, the ion abundance ratios have been compared to the continuing calibration verification (CCV) standard [EPA 1668C-16.3]

There were low levels of selected targets detected in the blank that were within the reference method control limits. Low level sample data may be elevated, as identified on the reports.

The method blank and selected samples received additional laboratory processing and re-analysis in order to fully recover all of the targets.

The recoveries of some or all of the extraction standards are below the method control limit for the laboratory control sample (LCS) and matrix spike duplicate. However, all of the native target recoveries are within limits for the LCS.

For the matrix spike and matrix spike duplicate, the recoveries of the native targets PCB-118 and PCB-105 were above the method control limit. However, the native target levels in the sample exceed the native fortification level. The recovery of PCB-209 is above the method control limit. Reported sample results may be elevated.

The extraction standard recoveries are all within limits for the samples.

The cleanup standard was inadvertently added after the acid silica column instead of prior to the column. This standard is used for diagnostic purposes. Sample data are not expected to be biased as a result.

The results for selected targets have been reported from the analysis of dilute solutions for some samples due to interferences.

For the sample XX, there were some peaks observed at the retention times of PCB congeners where the ion abundance ratio was not within the method control limit for positive identification. However, due to the retention time, peak shape and pattern of targets, it has been treated as due to the PCB congener. [EPA 1668C-16.5]

I certify that this data package is in compliance with the terms and condition of the contract , both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this data package (hardcopy and/or electronic version) has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Steve Kennedy
Technical Supervisor

30-Jun-17
Date

1435 Norjohn Court, Unit 1, Burlington, ON, Canada L7L 0E6
Phone: 905-331-3111, FAX: 905-331-4567

Certificate of Analysis

ALS Project Contact:	Whitney Davis	**Client Name:**	
ALS Project ID:		**Client Address:**	
ALS WO#:			
Date of Report	30-Jun-17		
Date of Sample Receipt	23-May-17	**Client Contact:**	
		Client Project ID:	

COMMENTS: **PCB Congeners by EPA 1668C**

PCB Congener Group Totals and Total PCB are a sum of detected values, including EMPC values, consistent with USEPA CLP SOW CBC1.2

All results have been reported on an as-received (wet weight) basis.

The recoveries of some or all of the extraction standards are below the method control limit for the laboratory control sample (LCS) and matrix spike duplicate. However, all of the native target recoveries are within limits for the LCS.

For the matrix spike and matrix spike duplicate, the recoveries of the native targets PCB-118 and PCB-105 were above the method control limit. However, the native target levels in the sample exceed the native fortification level. The recovery of PCB-209 is above the method control limit. Reported sample results may be elevated.

The extraction standard recoveries are all within limits for the samples.

The cleanup standard was inadvertently added after the acid silica column instead of prior to the column. This standard is used for diagnostic purpose. Sample data are not expected to be biased as a result.

The method blank and selected samples received additional laboratory processing and re-analysis in order to fully recover all of the targets.

The results for selected targets have been reported from the analysis of dilute solutions for some samples due to interferences.

Steve Kennedy
Technical Supervisor

ALS Life sciences

Sample Analysis summary Report

Sample Name				Duplicate		
ALS Sample ID	L1931034-1	L1931034-2	L1931034-3	WG2539476-4	L1931034-4	L1931034-5
Sample Size	4.8	4.7	4.78	4.78	4.68	4.87
Sample size units	g	g	g	g	g	g
Percent Moisture	5.60%	6.70%	5.70%	5.70%	8.30%	7.50%
Sample Matrix	Feed pellets	Feed pellets	Feed pellets	QC	Feed pellets	Feed pellets
Sampling Date	27-Apr-17	8-May-17	8-May-17	n/a	8-May-17	8-May-17
Extraction Date	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17
Target Analytes	**pg/g**	**pg/g**	**pg/g**	**pg/g**	**pg/g**	**pg/g**
PCB-001	<1.1	<2.7	2.55	2.50	4.09	3.44
PCB-002	4.00	5.68	3.33	3.61	2.76	3.05
PCB-003	3.28	3.55	1.78	2.12	3.15	<2.8
PCB-004	3.96	13.6	13.2	12.8	18.4	13.5
PCB-010	<0.14	<0.84	0.915	0.803	1.07	0.847
PCB-009	0.924	1.87	2.82	3.32	2.57	2.17
PCB-007	1.95	<1.3	<1.2	1.44	<2.0	1.64
PCB-006	2.51	6.30	6.47	6.69	9.27	6.47
PCB-005	<0.15	<0.074	<0.071	<0.10	1.02	<0.36
PCB-008	11.7	15.2	32.1	33.0	49.0	38.7
PCB-014	<0.10	<0.26	0.266	0.491	<0.24	<0.19
PCB-011	97.4	123	92.9	115	89.3	121
PCB-012/013	2.55	2.27	2.40	2.95	<1.9	2.73
PCB-015	7.29	10.2	10.2	11.8	14.9	11.3
PCB-019	<1.8	10.3	10.4	10.6	12.0	6.50
PCB-018/030	24.9	90.7	109	110	107	58.9
PCB-017	15.9	60.7	69.3	70.6	62.0	45.6
PCB-027	2.25	10.7	12.9	12.9	11.8	5.89
PCB-024	0.183	<0.041	1.44	1.26	1.26	<0.38
PCB-016	10.1	34.7	38.1	41.5	37.6	19.6
PCB-032	8.92	36.9	30.5	32.4	31.8	24.5
PCB-034	<0.44	2.02	2.48	2.64	2.70	1.30
PCB-023	0.152	0.354	<0.44	<0.46	<0.39	<0.16
PCB-026/029	14.0	40.7	50.2	52.7	46.4	22.8
PCB-025	4.00	17.8	21.9	22.3	20.6	10.8
PCB-031	40.4	144	192	200	193	99.5
PCB-020/028	73.8	231	335	341	291	144
PCB-021/033	23.3	69.6	73.1	77.7	72.7	52.9
PCB-022	15.2	52.0	65.2	69.4	60.9	31.4
PCB-036	<0.76	1.50	1.05	1.30	<0.15	1.40
PCB-039	<0.50	1.71	2.25	2.36	1.83	<0.90
PCB-038	0.173	0.494	<0.34	<0.51	<0.38	<0.33
PCB-035	3.08	2.71	1.77	3.67	2.04	2.57
PCB-037	9.28	23.1	22.4	28.8	<23	14.5
PCB-054	<0.27	1.18	1.17	1.15	1.22	<0.52
PCB-050/053	<11	62.9	76.3	75.7	73.0	37.4
PCB-045/051	14.5	<60	72.9	72.8	69.4	41.6
PCB-046	3.18	<14	<16	<17	<15	8.44
PCB-052	161	615	868	864	850	433
PCB-073	<0.082	<0.069	<0.060	<0.037	<0.17	<0.096
PCB-043	<2.4	<9.3	<9.9	<12	10.8	5.19
PCB-049/069	80.3	328	428	423	406	227
PCB-048	13.6	<38	49.0	50.9	47.7	27.3
PCB-044/047/065	122	425	577	574	534	276
PCB-059/062/075	7.18	35.1	47.1	46.8	44.3	<17
PCB-042	21.8	96.0	128	130	117	<53
PCB-040/041/071	<37	163	201	209	192	103
PCB-064	29.1	148	211	214	202	<80
PCB-072	3.08	11.1	<13	<13	<12	<6.4
PCB-068	4.69	14.3	17.9	18.0	<13	<7.3
PCB-057	0.825	2.45	3.48	3.38	3.09	<1.4
PCB-058	<0.084	<0.12	<0.20	<1.1	26.8	<12
PCB-067	<1.7	<7.4	10.1	10.1	9.91	6.07
PCB-063	4.79	17.1	<23	<23	<21	10.6
PCB-061/070/074/076	101	469	658	675	581	322
PCB-066	86.5	290	387	401	345	205
PCB-055	0.637	1.91	2.62	2.55	<0.37	<1.8
PCB-056	<15	80.6	101	107	96.6	59.8
PCB-060	<17	52.0	75.3	79.7	62.1	35.3
PCB-080	<0.68	0.503	0.699	<1.1	8.36	4.13
PCB-079	2.42	<6.0	9.61	7.80	7.82	4.49
PCB-078	<0.084	<0.12	<0.21	<1.1	<0.35	<0.34
PCB-081	<0.12	<0.44	0.585	<1.0	10.4	<5.4
PCB-077	<5.5	13.0	13.7	15.6	12.2	8.89
PCB-104	0.435	0.739	0.607	0.623	0.550	<0.20
PCB-096	0.972	3.78	4.00	3.98	3.93	2.14
PCB-103	5.94	20.3	25.7	25.5	22.3	<13
PCB-094	1.86	5.68	6.75	6.79	6.70	3.77
PCB-095	140	566	759	755	672	365
PCB-093/098/100/102	12.1	38.5	47.9	48.3	44.5	31.3

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Sample Analysis summary Report

Sample Name				Duplicate		
ALS Sample ID	L1931034-1	L1931034-2	L1931034-3	WG2539476-4	L1931034-4	L1931034-5
Sample Size	4.8	4.7	4.78	4.78	4.68	4.87
Sample size units	g	g	g	g	g	g
Percent Moisture	5.60%	6.70%	5.70%	5.70%	8.30%	7.50%
Sample Matrix	Feed pellets	Feed pellets	Feed pellets	QC	Feed pellets	Feed pellets
Sampling Date	27-Apr-17	8-May-17	8-May-17	n/a	8-May-17	8-May-17
Extraction Date	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17
Target Analytes	**pg/g**	**pg/g**	**pg/g**	**pg/g**	**pg/g**	**pg/g**
PCB-088/091	28.6	150	201	196	177	106
PCB-084	26.8	134	173	177	155	84.7
PCB-089	1.62	4.52	5.56	5.91	5.30	<2.7
PCB-121	<0.53	2.87	3.23	3.62	3.03	1.30
PCB-092	48.0	182	257	258	219	118
PCB-090/101/113	240	827	1150	1160	993	556
PCB-083/099	157	667	888	900	756	498
PCB-112	<0.18	<0.13	<0.11	<0.064	<0.23	<0.26
PCB-086/087/097/109/119/125	103	380	529	540	454	245
PCB-085/110/115/116/117	176	847	1160	1180	1030	571
PCB-082	10.8	44.6	61.3	63.9	56.5	31.2
PCB-111	0.776	<2.2	2.91	2.56	3.29	2.87
PCB-120	4.20	10.5	14.1	14.2	12.4	9.94
PCB-108/124	3.49	19.8	23.7	22.6	19.9	12.9
PCB-107	23.0	73.5	96.5	98.1	73.1	48.8
PCB-123	1.97	5.65	<10	<9.2	8.46	5.41
PCB-106	<0.18	<0.21	<1.2	<1.1	<0.31	<0.20
PCB-118	155	484	661	674	603	353
PCB-122	<1.2	<2.9	5.52	<5.0	<4.0	<2.4
PCB-114	2.76	10.0	<12	14.2	<11	<6.9
PCB-105	56.8	158	221	218	192	113
PCB-127	<0.69	1.59	<1.4	<1.7	<1.4	0.920
PCB-126	1.68	1.60	<2.0	<3.1	2.16	<0.82
PCB-155	4.38	13.5	5.75	5.87	<4.4	2.90
PCB-152	<0.067	<0.036	<0.056	<0.034	0.613	<0.27
PCB-150	2.57	6.73	6.99	6.79	7.80	5.88
PCB-136	20.0	96.2	109	107	118	64.9
PCB-145	<0.093	<0.17	0.151	0.0699	<0.17	<0.22
PCB-148	2.02	8.11	9.00	9.23	10.1	7.59
PCB-135/151	104	376	463	454	488	264
PCB-154	7.03	46.8	59.7	58.2	64.0	42.0
PCB-144	10.6	31.3	39.9	40.9	44.4	18.7
PCB-147/149	312	956	1130	1140	1090	618
PCB-134/143	11.9	37.3	39.2	47.6	40.4	21.8
PCB-139/140	6.96	24.7	30.3	27.0	27.5	14.8
PCB-131	1.93	6.21	7.49	7.85	7.31	3.80
PCB-142	<0.17	<0.23	<2.3	<1.0	<0.54	<0.35
PCB-132	55.9	217	262	266	269	137
PCB-133	9.44	42.7	47.3	47.3	46.8	31.8
PCB-165	1.03	5.80	<5.8	5.46	6.71	5.53
PCB-146	94.1	322	355	349	389	246
PCB-161	<0.12	<0.17	<1.7	<0.75	<0.36	<0.24
PCB-153/168	469	1460	1840	1860	1800	1030
PCB-141	52.4	152	164	161	174	83.4
PCB-130	23.9	77.4	79.5	77.2	90.1	55.2
PCB-137/164	32.2	112	129	130	134	65.9
PCB-129/138/163	448	1350	1580	1580	1610	892
PCB-160	<0.11	<0.16	<1.6	<0.70	<0.34	<0.22
PCB-158	<25	75.2	92.4	87.7	83.3	44.9
PCB-128/166	44.7	174	200	195	204	117
PCB-159	2.33	8.48	9.78	9.20	11.5	5.97
PCB-162	2.11	6.53	7.18	6.05	6.94	<2.8
PCB-167	13.1	34.3	<37	41.2	34.5	22.7
PCB-156/157	24.2	66.2	74.2	72.8	67.4	45.2
PCB-169	<0.90	<1.9	<1.7	<3.1	2.82	<1.5
PCB-188	<0.68	<3.2	3.43	3.27	<2.9	3.12
PCB-179	15.8	118	120	128	115	78.9
PCB-184	4.26	7.97	4.98	<4.4	2.92	1.42
PCB-176	5.47	23.1	24.6	27.8	22.1	13.6
PCB-186	<0.12	<0.077	<0.58	<0.66	<0.20	<0.16
PCB-178	<22	105	<100	115	98.1	71.3
PCB-175	3.43	<11	14.8	15.3	13.0	7.64
PCB-187	118	492	589	592	485	352
PCB-182	<0.86	2.62	<0.71	<0.81	2.33	<0.21
PCB-183	45.4	<140	181	189	189	114
PCB-185	2.15	11.4	<11	13.0	<12	11.5
PCB-174	54.0	216	<210	<210	218	128
PCB-177	43.1	146	<120	<130	141	104
PCB-181	<0.64	<2.0	<2.4	<1.6	1.93	<1.2
PCB-171/173	20.3	72.3	<63	<73	73.5	45.5
PCB-172	13.5	48.2	41.5	<41	44.9	<29

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Sample Analysis summary Report

Sample Name				Duplicate		
ALS Sample ID	L1931034-1	L1931034-2	L1931034-3	WG2539476-4	L1931034-4	L1931034-5
Sample Size	4.8	4.7	4.78	4.78	4.68	4.87
Sample size units	g	g	g	g	g	g
Percent Moisture	5.60%	6.70%	5.70%	5.70%	8.30%	7.50%
Sample Matrix	Feed pellets	Feed pellets	Feed pellets	QC	Feed pellets	Feed pellets
Sampling Date	27-Apr-17	8-May-17	8-May-17	n/a	8-May-17	8-May-17
Extraction Date	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17
Target Analytes	**pg/g**	**pg/g**	**pg/g**	**pg/g**	**pg/g**	**pg/g**
PCB-192	<0.15	<0.15	<0.63	<0.71	<0.22	<0.18
PCB-180/193	182	546	575	587	566	360
PCB-191	2.77	7.42	8.33	8.89	7.41	4.56
PCB-170	67.5	197	196	202	196	126
PCB-190	<9.9	<37	<34	<32	36.7	27.1
PCB-189	2.76	7.53	9.20	<6.7	7.29	5.69
PCB-202	5.81	48.1	<44	51.9	45.1	38.0
PCB-201	2.73	23.8	24.4	26.5	<20	17.4
PCB-204	<0.12	<0.47	<0.55	<0.59	<0.38	<0.30
PCB-197	1.22	7.43	<6.9	7.65	5.78	5.00
PCB-200	<1.3	9.23	9.96	12.8	<8.3	6.53
PCB-198/199	23.7	160	158	167	144	115
PCB-196	10.6	60.6	57.8	63.3	54.7	38.8
PCB-203	12.9	86.1	97.0	96.4	86.2	64.9
PCB-195	7.78	38.6	39.7	40.1	30.9	26.3
PCB-194	20.5	101	100	98.3	100	77.5
PCB-205	<0.95	<3.7	<5.9	6.25	4.38	<3.5
PCB-208	2.43	30.2	28.8	<29	26.7	25.3
PCB-207	1.22	12.1	13.3	<15	10.6	9.13
PCB-206	6.17	59.5	61.3	59.6	54.9	46.2
PCB-209	5.82	76.3	69.6	70.6	68.3	80.9
Extraction Standards	**% Rec**	**% Rec**	**% Rec**	**% Rec**	**% Rec**	**% Rec**
13C12-PCB-001	48	42	55	57	52	63
13C12-PCB-003	45	47	55	56	45	52
13C12-PCB-004	55	54	60	61	49	59
13C12-PCB-015	75	73	76	79	54	64
13C12-PCB-019	57	56	57	60	41	50
13C12-PCB-037	72	67	70	72	54	64
13C12-PCB-054	62	59	62	66	46	58
13C12-PCB-081	76	71	73	76	63	76
13C12-PCB-077	75	67	71	76	60	74
13C12-PCB-104	71	67	69	72	53	60
13C12-PCB-123	84	76	78	81	68	84
13C12-PCB-118	84	75	78	82	68	83
13C12-PCB-114	82	76	78	82	69	83
13C12-PCB-105	81	75	76	79	68	82
13C12-PCB-126	77	72	72	80	65	81
13C12-PCB-155	64	59	65	68	26	53
13C12-PCB-167	76	66	71	76	55	66
13C12-PCB-156/157	76	67	73	77	55	67
13C12-PCB-169	72	64	70	75	54	69
13C12-PCB-188	73	65	76	77	50	63
13C12-PCB-189	76	65	75	79	57	71
13C12-PCB-202	69	61	72	73	49	61
13C12-PCB-205	76	68	72	75	53	66
13C12-PCB-208	71	67	69	71	49	63
13C12-PCB-206	74	70	68	73	54	69
13C12-PCB-209	95	95	87	91	49	42
Cleanup Standards						
13C12-PCB-028	78	66	77	81	58	73
13C12-PCB-111	72	58	69	75	56	69
13C12-PCB-178	72	59	72	73	59	73

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Sample Analysis summary Report

Sample Name				Duplicate		
ALS Sample ID	L1931034-1	L1931034-2	L1931034-3	WG2539476-4	L1931034-4	L1931034-5
Sample Size	4.8	4.7	4.78	4.78	4.68	4.87
Sample size units	g	g	g	g	g	g
Percent Moisture	5.60%	6.70%	5.70%	5.70%	8.30%	7.50%
Sample Matrix	Feed pellets	Feed pellets	Feed pellets	QC	Feed pellets	Feed pellets
Sampling Date	27-Apr-17	8-May-17	8-May-17	n/a	8-May-17	8-May-17
Extraction Date	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17
Target Analytes	**pg/g**	**pg/g**	**pg/g**	**pg/g**	**pg/g**	**pg/g**
Homologue Group Totals						
Total MonoCB	8.38	11.9	7.66	8.23	10.0	9.29
Total DiCB	128	175	162	188	189	199
Total TriCB	249	831	1040	1080	978	544
Total TetraCB	747	2960	4000	4050	3770	2000
Total PentaCB	1200	4640	6320	6390	5530	3190
Total HexaCB	1780	5710	6780	6800	6830	3850
Total HeptaCB	615	2190	2310	2380	2240	1480
Total OctaCB	86.7	539	544	570	500	393
Total NonaCB	9.82	102	103	104	92.2	80.6
DecaCB	5.82	76.3	69.6	70.6	68.3	80.9
Total PCB	4840	17200	21300	21600	20200	11800
Toxic Equivalency - (WHO 2005)						
Lower Bound PCB TEQ	0.176	0.184	0.0305	0.0322	0.332	0.0172
Mid Point PCB TEQ	0.203	0.241	0.258	0.436	0.333	0.146
Upper Bound PCB TEQ	0.203	0.241	0.283	0.436	0.333	0.146

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Quality Control Summary Report

Sample Name	**Method Blank**
ALS Sample ID	WG2539476-1
Sample Size	5
Sample size units	g
Percent Moisture	n/a
Sample Matrix	QC
Sampling Date	n/a
Extraction Date	19-Jun-17

Target Analytes	**pg/g**
PCB-001	<0.21
PCB-002	<0.087
PCB-003	0.595
PCB-004	0.639
PCB-010	<0.099
PCB-009	0.263
PCB-007	<0.12
PCB-006	<0.29
PCB-005	<0.10
PCB-008	1.88
PCB-014	<0.086
PCB-011	21.9
PCB-012/013	0.398
PCB-015	1.27
PCB-019	<0.11
PCB-018/030	1.33
PCB-017	0.855
PCB-027	<0.12
PCB-024	<0.052
PCB-016	<0.81
PCB-032	0.648
PCB-034	<0.082
PCB-023	<0.084
PCB-026/029	<0.49
PCB-025	<0.23
PCB-031	3.25
PCB-020/028	4.81
PCB-021/033	2.37
PCB-022	1.73
PCB-036	0.133
PCB-039	<0.085
PCB-038	<0.079
PCB-035	1.26
PCB-037	2.65
PCB-054	<0.051
PCB-050/053	0.241
PCB-045/051	<1.0
PCB-046	0.205
PCB-052	2.91
PCB-073	<0.051
PCB-043	<0.090
PCB-049/069	<1.2
PCB-048	<0.45
PCB-044/047/065	<5.6
PCB-059/062/075	0.315
PCB-042	0.791
PCB-040/041/071	1.92
PCB-064	1.62
PCB-072	<0.10
PCB-068	0.651
PCB-057	<0.098
PCB-058	<0.10
PCB-067	<0.095
PCB-063	<0.11
PCB-061/070/074/076	6.57
PCB-066	3.85
PCB-055	<0.11
PCB-056	1.88
PCB-060	1.46
PCB-080	<0.10
PCB-079	<0.095
PCB-078	<0.10
PCB-081	<0.086
PCB-077	0.457
PCB-104	<0.027
PCB-096	<0.025
PCB-103	<0.079
PCB-094	<0.090
PCB-095	1.68
PCB-093/098/100/102	<0.085

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Quality Control Summary Report

Sample Name	**Method Blank**
ALS Sample ID	WG2539476-1
Sample Size	5
Sample size units	g
Percent Moisture	n/a
Sample Matrix	QC
Sampling Date	n/a
Extraction Date	19-Jun-17

Target Analytes	**pg/g**
PCB-088/091	<0.39
PCB-084	0.674
PCB-089	<0.092
PCB-121	<0.061
PCB-092	0.405
PCB-090/101/113	2.19
PCB-083/099	<1.2
PCB-112	<0.074
PCB-086/087/097/109/119/125	1.79
PCB-085/110/115/116/117	3.58
PCB-082	<0.45
PCB-111	<0.065
PCB-120	<0.063
PCB-108/124	<0.071
PCB-107	<0.11
PCB-123	<0.052
PCB-106	<0.057
PCB-118	1.76
PCB-122	<0.059
PCB-114	<0.049
PCB-105	0.883
PCB-127	<0.054
PCB-126	<0.052
PCB-155	0.118
PCB-152	<0.029
PCB-150	<0.030
PCB-136	0.252
PCB-145	<0.032
PCB-148	<0.041
PCB-135/151	<0.48
PCB-154	<0.038
PCB-144	<0.039
PCB-147/149	1.64
PCB-134/143	<0.091
PCB-139/140	<0.084
PCB-131	<0.090
PCB-142	<0.093
PCB-132	0.710
PCB-133	<0.088
PCB-165	<0.069
PCB-146	0.308
PCB-161	<0.067
PCB-153/168	1.51
PCB-141	<0.097
PCB-130	<0.12
PCB-137/164	0.271
PCB-129/138/163	1.79
PCB-160	<0.064
PCB-158	<0.14
PCB-128/166	<0.23
PCB-159	<0.065
PCB-162	<0.067
PCB-167	<0.058
PCB-156/157	<0.12
PCB-169	<0.067
PCB-188	<0.042
PCB-179	0.206
PCB-184	0.101
PCB-176	<0.048
PCB-186	<0.051
PCB-178	<0.068
PCB-175	<0.064
PCB-187	0.322
PCB-182	<0.067
PCB-183	0.173
PCB-185	<0.065
PCB-174	0.244
PCB-177	<0.12
PCB-181	<0.068
PCB-171/173	<0.13
PCB-172	<0.073

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Quality Control Summary Report

Sample Name	**Method Blank**
ALS Sample ID	WG2539476-1
Sample Size	5
Sample size units	g
Percent Moisture	n/a
Sample Matrix	QC
Sampling Date	n/a
Extraction Date	19-Jun-17

Target Analytes	**pg/g**
PCB-192	<0.062
PCB-180/193	<0.42
PCB-191	<0.055
PCB-170	0.230
PCB-190	<0.052
PCB-189	<0.073
PCB-202	<0.050
PCB-201	<0.047
PCB-204	<0.043
PCB-197	<0.047
PCB-200	<0.045
PCB-198/199	0.207
PCB-196	<0.071
PCB-203	<0.063
PCB-195	<0.12
PCB-194	<0.12
PCB-205	<0.081
PCB-208	<0.20
PCB-207	<0.22
PCB-206	<0.37
PCB-209	<0.16
Extraction Standards	**% Rec**
13C12-PCB-001	43
13C12-PCB-003	40
13C12-PCB-004	49
13C12-PCB-015	65
13C12-PCB-019	50
13C12-PCB-037	66
13C12-PCB-054	53
13C12-PCB-081	71
13C12-PCB-077	70
13C12-PCB-104	60
13C12-PCB-123	81
13C12-PCB-118	80
13C12-PCB-114	80
13C12-PCB-105	81
13C12-PCB-126	78
13C12-PCB-155	61
13C12-PCB-167	71
13C12-PCB-156/157	73
13C12-PCB-169	69
13C12-PCB-188	70
13C12-PCB-189	74
13C12-PCB-202	49
13C12-PCB-205	74
13C12-PCB-208	72
13C12-PCB-206	72
13C12-PCB-209	101
Cleanup Standards	
13C12-PCB-028	69
13C12-PCB-111	69
13C12-PCB-178	70

ALS Life sciences

Quality Control Summary Report

Sample Name	Method Blank
ALS Sample ID	WG2539476-1
Sample Size	5
Sample size units	g
Percent Moisture	n/a
Sample Matrix	QC
Sampling Date	n/a
Extraction Date	19-Jun-17
Target Analytes	**pg/g**
Homologue Group Totals	
Total MonoCB	0.805
Total DiCB	26.8
Total TriCB	20.7
Total TetraCB	31.2
Total PentaCB	15.2
Total HexaCB	7.69
Total HeptaCB	1.95
Total OctaCB	0.207
Total NonaCB	<0.20
DecaCB	0.160
Total PCB	105
Toxic Equivalency - (WHO 2005)	
Lower Bound PCB TEQ	0.000125
Mid Point PCB TEQ	0.00375
Upper Bound PCB TEQ	0.00737

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Sample Analysis summary Report

Sample Name	Laboratory Control Sample	Matrix Spike		Matrix Spike Duplicate	
ALS Sample ID	WG2539476-2	WG2539476-5	L1931034-3	WG2539476-6	L1931034-3
Sample Size	1	1	4.78	1	4.78
Sample size units	n/a	n/a	g	n/a	g
Percent Moisture	n/a	n/a	5.70%	n/a	5.70%
Sample Matrix	QC	QC	Feed pellets	QC	Feed pellets
Sampling Date	n/a	n/a	8-May-17	n/a	8-May-17
Extraction Date	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17	19-Jun-17
Target Analytes	**% Rec**	**% Rec**	**pg/g**	**% Rec**	**pg/g**
PCB-001	107	109	2.55	109	2.55
PCB-003	109	113	1.78	112	1.78
PCB-004	106	108	13.2	108	13.2
PCB-015	117	122	10.2	120	10.2
PCB-019	107	115	10.4	114	10.4
PCB-037	87	101	22.4	102	22.4
PCB-054	105	109	1.17	109	1.17
PCB-081	92	96	0.585	96	0.585
PCB-077	94	101	13.7	100	13.7
PCB-104	97	99	0.607	98	0.607
PCB-123	108	161	<10	146	<10
PCB-118	102	453	661	462	661
PCB-114	102	111	<12	113	<12
PCB-105	100	215	221	220	221
PCB-126	107	111	<2.0	111	<2.0
PCB-155	102	109	5.75	103	5.75
PCB-167	94	117	<37	118	<37
PCB-156/157	93	113	74.2	114	74.2
PCB-169	93	98	<1.7	96	<1.7
PCB-188	89	92	3.43	93	3.43
PCB-189	100	116	9.20	118	9.20
PCB-202	102	128	<44	128	<44
PCB-205	96	97	<5.9	98	<5.9
PCB-208	90	112	28.8	111	28.8
PCB-206	101	132	61.3	136	61.3
PCB-209	120	166	69.6	166	69.6
Extraction Standards	**% Rec**	**% Rec**	**% Rec**	**% Rec**	**% Rec**
13C12-PCB-001	7	58	55	57	55
13C12-PCB-003	7	51	55	45	55
13C12-PCB-004	7	56	60	56	60
13C12-PCB-015	9	55	76	55	76
13C12-PCB-019	6	48	57	49	57
13C12-PCB-037	11	57	70	58	70
13C12-PCB-054	8	52	62	55	62
13C12-PCB-081	12	68	73	69	73
13C12-PCB-077	12	64	71	66	71
13C12-PCB-104	9	59	69	62	69
13C12-PCB-123	12	71	78	77	78
13C12-PCB-118	12	70	78	75	78
13C12-PCB-114	13	71	78	77	78
13C12-PCB-105	13	69	76	73	76
13C12-PCB-126	12	67	72	73	72
13C12-PCB-155	6	34	65	9	65
13C12-PCB-167	10	60	71	63	71
13C12-PCB-156/157	10	59	73	65	73
13C12-PCB-169	10	59	70	65	70
13C12-PCB-188	10	58	76	44	76
13C12-PCB-189	11	61	75	68	75
13C12-PCB-202	9	56	72	60	72
13C12-PCB-205	9	58	72	63	72
13C12-PCB-208	9	55	69	50	69
13C12-PCB-206	9	59	68	65	68
13C12-PCB-209	7	47	87	32	87
Cleanup Standards					
13C12-PCB-028	12	67	77	69	77
13C12-PCB-111	10	65	69	67	69
13C12-PCB-178	10	69	72	77	72

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Sample Analysis summary Report

Sample Name	**CCV**	**CCV**	**CCV**	**CCV**	**CCV**	**CCV**
ALS Sample ID	H5-17-WDM-0391	H5-17-WDM-0391	H5-17-CCV-0395	H5-17-CCV-0397	H5-17-WDM-0398	H5-17-WDM-0399
Sample Size	1	1	1	1	1	1
Sample size units	n/a	n/a	n/a	n/a	n/a	n/a
Percent Moisture	n/a	n/a	n/a	n/a	n/a	n/a
Sample Matrix	QC	QC	QC	QC	QC	QC
Sampling Date	n/a	n/a	n/a	n/a	n/a	n/a
Extraction Date	n/a	n/a	n/a	n/a	n/a	n/a
Target Analytes	**% Rec**	**% Rec**	**% Rec**	**% Rec**	**% Rec**	**% Rec**
PCB-001	108	114	106	108	109	113
PCB-003	111	116	110	111	112	117
PCB-004	103	102	99	100	98	98
PCB-015	124	109	104	101	100	99
PCB-019	104	106	105	104	100	100
PCB-037	100	107	117	119	105	111
PCB-054	109	110	109	109	107	106
PCB-081	90	90	101	102	87	87
PCB-077	96	94	101	103	94	93
PCB-104	99	99	113	114	95	97
PCB-123	105	98	112	110	94	110
PCB-118	112	98	110	108	102	92
PCB-114	107	97	106	106	98	95
PCB-105	107	102	108	107	96	99
PCB-126	107	102	111	109	97	99
PCB-155	108	107	117	120	100	98
PCB-167	96	87	107	109	95	97
PCB-156/157	95	96	106	108	94	96
PCB-169	96	97	106	108	94	98
PCB-188	87	87	100	101	85	86
PCB-189	114	108	115	113	103	104
PCB-202	102	97	111	110	99	101
PCB-205	95	94	107	109	95	96
PCB-208	98	98	110	110	97	96
PCB-206	98	100	111	109	97	98
PCB-209	131	112	108	108	105	103
Extraction Standards	**% Rec**	**% Rec**	**% Rec**	**% Rec**	**% Rec**	**% Rec**
13C12-PCB-001	106	105	103	106	100	104
13C12-PCB-003	100	102	98	101	97	97
13C12-PCB-004	103	100	100	101	100	103
13C12-PCB-015	90	111	102	109	103	115
13C12-PCB-019	84	81	93	93	96	95
13C12-PCB-037	98	104	104	108	103	107
13C12-PCB-054	95	93	101	103	101	101
13C12-PCB-081	119	121	114	117	101	110
13C12-PCB-077	115	118	112	114	97	105
13C12-PCB-104	102	102	104	103	103	102
13C12-PCB-123	120	133	115	124	103	119
13C12-PCB-118	121	132	116	125	102	118
13C12-PCB-114	122	133	117	123	105	120
13C12-PCB-105	121	133	115	123	104	119
13C12-PCB-126	120	130	111	122	101	119
13C12-PCB-155	89	86	97	95	101	96
13C12-PCB-167	104	62	103	103	99	105
13C12-PCB-156/157	106	105	104	104	101	105
13C12-PCB-169	106	86	98	100	96	105
13C12-PCB-188	105	101	107	104	106	100
13C12-PCB-189	104	113	94	103	97	113
13C12-PCB-202	101	69	107	105	104	101
13C12-PCB-205	107	74	106	106	103	109
13C12-PCB-208	103	103	117	111	106	99
13C12-PCB-206	111	106	100	102	97	105
13C12-PCB-209	102	134	113	121	111	144
Cleanup Standards						
13C12-PCB-028	99	106	101	106	100	106
13C12-PCB-111	103	101	102	101	97	101
13C12-PCB-178	109	106	108	106	105	105

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SVOC DATA PACKAGE

SECTION 2: DATA SUMMARY REPORT

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-1	Sampling Date	27-Apr-17		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.8	g	--e-signature--
Sample Matrix		Percent Moisture	5.6%		28-Jun-2017
		Split Ratio	1		

Run Information	**Run 1**	**Run 2**
Filename	5-170626A12	5-170627A05
Run Date	26-Jun-17 20:25	27-Jun-17 15:03
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
PCB-001		8.82	<1.1	0.13	J,NJ	1.1	5.2						
PCB-002		10.23	4.00	0.13	J		5.2						
PCB-003		10.36	3.28	0.14	J,B		5.2						
PCB-004		10.52	3.96	0.24	J,B		5.2						
PCB-010		NotFnd	<0.14	0.14	UJ		5.2						
PCB-009		11.81	0.924	0.14	J,B		5.2						
PCB-007		11.91	1.95	0.13	J		5.2						
PCB-006		12.07	2.51	0.13	J		5.2						
PCB-005		NotFnd	<0.15	0.15	UJ		5.2						
PCB-008		12.33	11.7	0.13	B		5.2						
PCB-014		NotFnd	<0.10	0.10	UJ		5.2						
PCB-011		13.83	97.4	0.12	B		5.2						
PCB-012/013		14.03	2.55	0.12	J,B		5.2						
PCB-015		14.23	7.29	0.099	B		5.2						
PCB-019		12.55	<1.8	0.14	J,NJ	1.8	5.2						
PCB-018/030		13.65	24.9	0.13			5.2						
PCB-017		13.90	15.9	0.18			5.2						
PCB-027		14.03	2.25	0.11	J		5.2						
PCB-024		14.13	0.183	0.11	M,J		5.2						
PCB-016		14.19	10.1	0.21	M		5.2						
PCB-032		14.49	8.92	0.096			5.2						
PCB-034		15.18	<0.44	0.092	J,NJ	0.44	5.2						
PCB-023		15.26	0.152	0.094	J		5.2						
PCB-026/029		15.45	14.0	0.11			5.2						
PCB-025		15.59	4.00	0.085	J		5.2						
PCB-031		15.77	40.4	0.085	M		5.2						
PCB-020/028		15.94	73.8	0.097			5.2						
PCB-021/033		16.09	23.3	0.089	B		5.2						
PCB-022		16.32	15.2	0.10	B		5.2						
PCB-036		17.14	<0.76	0.081	J,NJ	0.76	5.2						
PCB-039		17.37	<0.50	0.095	J,NJ	0.50	5.2						
PCB-038		17.69	0.173	0.089	J		5.2						
PCB-035		17.95	3.08	0.095	J,B		5.2						
PCB-037		18.18	9.28	0.099	B		5.2						
PCB-054		14.41	<0.27	0.083	M,J,NJ	0.27	5.2						
PCB-050/053		15.61	<11	0.12	NJ	11	5.2						
PCB-045/051		16.04	14.5	0.12			5.2						
PCB-046		16.20	3.18	0.15	J		5.2						
PCB-052		16.94	161	0.13			5.2						
PCB-073		NotFnd	<0.082	0.082	UJ		5.2						
PCB-043		17.08	<2.4	0.15	J,NJ	2.4	5.2						
PCB-049/069		17.21	80.3	0.097			5.2						
PCB-048		17.37	13.6	0.12			5.2						
PCB-044/047/065		17.50	122	0.11			5.2						
PCB-059/062/075		17.69	7.18	0.091			5.2						
PCB-042		17.80	21.8	0.13			5.2						
PCB-040/041/071		18.06	<37	0.12	NJ	37	5.2						
PCB-064		18.20	29.1	0.086			5.2						
PCB-072		18.60	3.08	0.084	J		5.2						
PCB-068		18.76	4.69	0.070	J,B		5.2						
PCB-057		18.99	0.825	0.080	J		5.2						
PCB-058		NotFnd	<0.084	0.084	UJ		5.2						
PCB-067		19.22	<1.7	0.077	J,NJ	1.7	5.2						
PCB-063		19.36	4.79	0.081	J		5.2						
PCB-061/070/074/076		19.54	101	0.085			5.2						
PCB-066		19.72	86.5	0.082			5.2						
PCB-055		19.82	0.637	0.086	J		5.2						
PCB-056		20.10	<15	0.082	NJ	15	5.2						
PCB-060		20.23	<17	0.084	NJ	17	5.2						
PCB-080		20.34	<0.68	0.081	M,J,NJ	0.68	5.2						
PCB-079		21.21	2.42	0.077	J		5.2						
PCB-078		NotFnd	<0.084	0.084	UJ		5.2						
PCB-081	0.0003	21.77	<0.12	0.072	M,J,NJ	0.12	5.2						
PCB-077	0.0001	22.06	<5.5	0.077	NJ	5.5	5.2						
PCB-104		17.47	0.435	0.050	J		5.2						
PCB-096		17.70	0.972	0.052	J		5.2						
PCB-103		18.69	5.94	0.19			5.2						
PCB-094		18.84	1.86	0.22	J		5.2						
PCB-095		19.09	140	0.23	M		5.2						
PCB-093/098/100/102		19.27	12.1	0.21	M		5.2						

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-1	Sampling Date	27-Apr-17		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.8	g	--e-signature--
Sample Matrix		Percent Moisture	5.6%		28-Jun-2017
		Split Ratio	1		

Run Information	**Run 1**	**Run 2**
Filename	5-170626A12	5-170627A05
Run Date	26-Jun-17 20:25	27-Jun-17 15:03
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL
PCB-088/091		19.54	28.6	0.22			5.2						
PCB-084		19.69	26.8	0.26			5.2						
PCB-089		19.94	1.62	0.23	J		5.2						
PCB-121		20.08	<0.53	0.15	J,NJ	0.53	5.2						
PCB-092		20.31	48.0	0.22			5.2						
PCB-090/101/113		20.62	240	0.20			5.2						
PCB-083/099		20.93	157	0.21			5.2						
PCB-112		NotFnd	<0.18	0.18	UJ		5.2						
PCB-086/087/097/109/119/125		21.21	103	0.19	M		5.2						
PCB-085/110/115/116/117		21.68	176	0.18	M		5.2						
PCB-082		21.88	10.8	0.26			5.2						
PCB-111		22.01	0.776	0.16	J		5.2						
PCB-120		22.26	4.20	0.16	J		5.2						
PCB-108/124		22.88	3.49	0.17	J		5.2						
PCB-107		23.02	23.0	0.17	M		5.2						
PCB-123	0.00003	23.06	1.97	0.17	M,J		5.2						
PCB-106		NotFnd	<0.18	0.18	UJ		5.2						
PCB-118	0.00003	23.25	155	0.15	M		5.2						
PCB-122								NotFnd	<1.2	1.2	UJ		52
PCB-114	0.00003	23.54	2.76	0.17	J		5.2						
PCB-105	0.00003	23.89	56.8	0.17			5.2						
PCB-127		24.63	<0.69	0.17	M,J,NJ	0.69	5.2						
PCB-126	0.1	25.48	1.68	0.19	J		5.2						
PCB-155		20.47	4.38	0.065	J		5.2						
PCB-152		NotFnd	<0.067	0.067	UJ		5.2						
PCB-150		20.70	2.57	0.069	M,J		5.2						
PCB-136		20.93	20.0	0.072			5.2						
PCB-145		21.06	<0.093	0.074	J,NJ	0.093	5.2						
PCB-148		21.80	2.02	0.093	J		5.2						
PCB-135/151		22.14	104	0.093			5.2						
PCB-154		22.26	7.03	0.088			5.2						
PCB-144		22.45	10.6	0.090			5.2						
PCB-147/149		22.64	312	0.15	M		5.2						
PCB-134/143		22.77	11.9	0.16	M		5.2						
PCB-139/140		22.95	6.96	0.15			5.2						
PCB-131		23.08	1.93	0.16	J		5.2						
PCB-142		NotFnd	<0.17	0.17	UJ		5.2						
PCB-132								23.34	55.9	1.3			52
PCB-133		23.52	9.44	0.16			5.2						
PCB-165		23.72	1.03	0.12	J		5.2						
PCB-146		23.85	94.1	0.14			5.2						
PCB-161		NotFnd	<0.12	0.12	UJ		5.2						
PCB-153/168		24.18	469	0.12			5.2						
PCB-141		24.31	52.4	0.17			5.2						
PCB-130		24.53	23.9	0.17			5.2						
PCB-137/164		24.69	32.2	0.14			5.2						
PCB-129/138/163		24.87	448	0.15			5.2						
PCB-160		NotFnd	<0.11	0.11	UJ		5.2						
PCB-158								25.07	<25	0.98	J,NJ	25	52
PCB-128/166		25.55	44.7	0.14			5.2						
PCB-159		26.01	2.33	0.12	J		5.2						
PCB-162		26.15	2.11	0.12	J		5.2						
PCB-167	0.00003	26.40	13.1	0.10			5.2						
PCB-156/157	0.00003	27.01	24.2	0.13			10						
PCB-169	0.03	28.70	<0.90	0.12	J,NJ	0.90	5.2						
PCB-188		23.48	<0.68	0.10	J,NJ	0.68	5.2						
PCB-179		23.71	15.8	0.12			5.2						
PCB-184		23.94	4.26	0.11	J		5.2						
PCB-176		24.15	5.47	0.12			5.2						
PCB-186		NotFnd	<0.12	0.12	UJ		5.2						
PCB-178								25.07	<22	1.0	J,NJ	22	52
PCB-175		25.40	3.43	0.16	J		5.2						
PCB-187		25.53	118	0.13			5.2						
PCB-182		25.64	<0.86	0.16	J,NJ	0.86	5.2						
PCB-183		25.84	45.4	0.16			5.2						
PCB-185		25.94	2.15	0.16	M,J		5.2						
PCB-174		26.01	54.0	0.18	M		5.2						
PCB-177		26.24	43.1	0.17			5.2						
PCB-181		26.43	<0.64	0.17	J,NJ	0.64	5.2						
PCB-171/173		26.56	20.3	0.18			5.2						
PCB-172		27.37	13.5	0.18			5.2						

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-1	Sampling Date	27-Apr-17		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.8	g	--e-signature--
Sample Matrix		Percent Moisture	5.6%		
		Split Ratio	1		28-Jun-2017

Run Information	**Run 1**	**Run 2**
Filename	5-170626A12	5-170627A05
Run Date	26-Jun-17 20:25	27-Jun-17 15:03
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
PCB-192		NotFnd	<0.15	0.15	UJ		5.2						
PCB-180/193		27.70	182	0.15			5.2						
PCB-191		27.88	2.77	0.14	J		5.2						
PCB-170		28.39	67.5	0.18			5.2						
PCB-190		28.67	<9.9	0.13	NJ	9.9	5.2						
PCB-189	0.00003	29.98	2.76	0.11	J		5.2						
PCB-202		26.27	5.81	0.10			5.2						
PCB-201								26.74	2.73	0.72	M,J		52
PCB-204		27.09	<0.12	0.10	J,NJ	0.12	5.2						
PCB-197		27.22	1.22	0.11	J		5.2						
PCB-200		27.30	<1.3	0.11	J,NJ	1.3	5.2						
PCB-198/199		28.72	23.7	0.16			5.2						
PCB-196		29.04	10.6	0.17			5.2						
PCB-203		29.14	12.9	0.15			5.2						
PCB-195								29.88	7.78	1.2	J		52
PCB-194		31.11	20.5	0.16			5.2						
PCB-205								NotFnd	<0.95	0.95	UJ		52
PCB-208		29.70	2.43	0.38	M,J		5.2						
PCB-207		30.19	1.22	0.42	J		5.2						
PCB-206		32.48	6.17	0.66			5.2						
PCB-209		33.62	5.82	0.20			5.2						

Extraction Standards	**pg**	**Time**	**% Rec**	**Limits**	**Time**	**% Rec**	**Limits**
13C12-PCB-001	2000	8.82	48	5-145			
13C12-PCB-003	2000	10.34	45	5-145			
13C12-PCB-004	2000	10.52	55	5-145			
13C12-PCB-015	2000	14.21	75	5-145			
13C12-PCB-019	2000	12.53	57	5-145			
13C12-PCB-037	2000	18.16	72	5-145			
13C12-PCB-054	2000	14.39	62	5-145			
13C12-PCB-081	2000	21.75	76	5-145			
13C12-PCB-077	2000	22.06	75	5-145			
13C12-PCB-104	2000	17.46	71	5-145			
13C12-PCB-123	2000	23.06	84	5-145			
13C12-PCB-118	2000	23.23	84	5-145			
13C12-PCB-114	2000	23.52	82	5-145			
13C12-PCB-105	2000	23.89	81	5-145			
13C12-PCB-126	2000	25.46	77	5-145			
13C12-PCB-155	2000	20.46	64	5-145			
13C12-PCB-167	2000	26.38	76	5-145			
13C12-PCB-156/157	4000	27.01	76	5-145			
13C12-PCB-169	2000	28.68	72	5-145			
13C12-PCB-188	2000	23.48	73	5-145			
13C12-PCB-189	2000	29.97	76	5-145			
13C12-PCB-202	2000	26.25	69	5-145			
13C12-PCB-205	2000	31.37	76	5-145			
13C12-PCB-208	2000	29.70	71	5-145			
13C12-PCB-206	2000	32.46	74	5-145			
13C12-PCB-209	2000	33.59	95	5-145			
Cleanup Standards							
13C12-PCB-028	2000	15.92	78	5-145			
13C12-PCB-111	2000	21.99	72	5-145			
13C12-PCB-178	2000	25.05	72	5-145			

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-1	Sampling Date	27-Apr-17		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.8	g	--e-signature--
Sample Matrix		Percent Moisture	5.6%		28-Jun-2017
		Split Ratio	1		

Run Information	**Run 1**	**Run 2**
Filename	5-170626A12	5-170627A05
Run Date	26-Jun-17 20:25	27-Jun-17 15:03
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
Homologue Group Totals													
Total MonoCB			8.38	0.13	J		5.2						
Total DiCB			128	0.099	J		5.2						
Total TriCB			249	0.081	J		5.2						
Total TetraCB			747	0.070	J		5.2						
Total PentaCB			1200	0.050	J		5.2						
Total HexaCB			1780	0.065	J		5.2						
Total HeptaCB			615	0.10	J		5.2						
Total OctaCB			86.7	0.10	J		5.2						
Total NonaCB			9.82	0.38	J		5.2						
DecaCB			5.82	0.20	J		5.2						
Total PCB			4840		J								
Toxic Equivalency - (WHO 2005)													
Lower Bound PCB TEQ			0.176										
Mid Point PCB TEQ			0.203										
Upper Bound PCB TEQ			0.203										

EDL	Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.
TEF	Indicates the Toxic Equivalency Factor TEQ Indicates the Toxic Equivalency
LQL	Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.
M	Indicates that a peak has been manually integrated.
UJ	Indicates that this compound was not detected above the EDL.
J	indicates that the analyte was positively identifed. The associated numerical result is an estimate.
NJ	Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.
B	Indicates that this target was detected in the blank at greater than 10% of the sample concentration.
EMPC	Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-2	Sampling Date	8-May-17		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.7	g	--e-signature--
Sample Matrix		Percent Moisture	6.7%		28-Jun-2017
		Split Ratio	1		

Run Information	**Run 1**	**Run 2**
Filename	5-170626A13	5-170627A06
Run Date	26-Jun-17 21:05	27-Jun-17 15:42
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
PCB-001		8.83	<2.7	0.12	J,NJ	2.7	5.3						
PCB-002		10.25	5.68	0.10			5.3						
PCB-003		10.38	3.55	0.10	J,B		5.3						
PCB-004		10.54	13.6	0.12			5.3						
PCB-010		10.66	<0.84	0.071	J,NJ	0.84	5.3						
PCB-009		11.81	1.87	0.069	J,B		5.3						
PCB-007		11.92	<1.3	0.064	J,NJ	1.3	5.3						
PCB-006		12.07	6.30	0.066			5.3						
PCB-005		NotFnd	<0.074	0.074	UJ		5.3						
PCB-008		12.37	15.2	0.068	B		5.3						
PCB-014		13.34	<0.26	0.067	J,NJ	0.26	5.3						
PCB-011		13.85	123	0.076	B		5.3						
PCB-012/013		14.05	2.27	0.077	J,B		5.3						
PCB-015		14.23	10.2	0.064	B		5.3						
PCB-019		12.56	10.3	0.093			5.3						
PCB-018/030		13.67	90.7	0.048			5.3						
PCB-017		13.91	60.7	0.064			5.3						
PCB-027		14.05	10.7	0.039			5.3						
PCB-024		NotFnd	<0.041	0.041	UJ		5.3						
PCB-016		14.21	34.7	0.075	M		5.3						
PCB-032		14.50	36.9	0.035			5.3						
PCB-034		15.20	2.02	0.15	J		5.3						
PCB-023		15.30	0.354	0.15	J		5.3						
PCB-026/029		15.46	40.7	0.17			5.3						
PCB-025		15.59	17.8	0.14			5.3						
PCB-031		15.77	144	0.14			5.3						
PCB-020/028		15.96	231	0.16			5.3						
PCB-021/033		16.09	69.6	0.14			5.3						
PCB-022		16.32	52.0	0.16			5.3						
PCB-036		17.16	1.50	0.13	J		5.3						
PCB-039		17.37	1.71	0.15	J		5.3						
PCB-038		17.70	0.494	0.14	J		5.3						
PCB-035		17.95	2.71	0.15	J,B		5.3						
PCB-037		18.18	23.1	0.16	B		5.3						
PCB-054		14.42	1.18	0.059	J		5.3						
PCB-050/053		15.63	62.9	0.097			5.3						
PCB-045/051		16.04	<60	0.10	NJ	60	5.3						
PCB-046		16.20	<14	0.13	NJ	14	5.3						
PCB-052		16.94	615	0.11			5.3						
PCB-073		NotFnd	<0.069	0.069	UJ		5.3						
PCB-043		17.09	<9.3	0.12	NJ	9.3	5.3						
PCB-049/069		17.22	328	0.081			5.3						
PCB-048		17.39	<38	0.10	NJ	38	5.3						
PCB-044/047/065		17.52	425	0.094			5.3						
PCB-059/062/075		17.70	35.1	0.076			5.3						
PCB-042		17.82	96.0	0.11			5.3						
PCB-040/041/071		18.08	163	0.10			5.3						
PCB-064		18.20	148	0.072			5.3						
PCB-072		18.61	11.1	0.12			5.3						
PCB-068		18.76	14.3	0.10			5.3						
PCB-057		19.00	2.45	0.12	J		5.3						
PCB-058		NotFnd	<0.12	0.12	UJ		5.3						
PCB-067		19.23	<7.4	0.11	NJ	7.4	5.3						
PCB-063		19.38	17.1	0.12			5.3						
PCB-061/070/074/076		19.56	469	0.12			5.3						
PCB-066		19.74	290	0.12			5.3						
PCB-055		19.84	1.91	0.13	J		5.3						
PCB-056		20.12	80.6	0.12			5.3						
PCB-060		20.23	52.0	0.12			5.3						
PCB-080		20.38	0.503	0.12	M,J		5.3						
PCB-079		21.23	<6.0	0.11	NJ	6.0	5.3						
PCB-078		NotFnd	<0.12	0.12	UJ		5.3						
PCB-081	0.0003	21.77	<0.44	0.10	M,J,NJ	0.44	5.3						
PCB-077	0.0001	22.08	13.0	0.12			5.3						
PCB-104		17.49	0.739	0.029	J		5.3						
PCB-096		17.72	3.78	0.030	J		5.3						
PCB-103		18.71	20.3	0.13			5.3						
PCB-094		18.84	5.68	0.15			5.3						
PCB-095		19.10	566	0.16	M		5.3						
PCB-093/098/100/102		19.18	38.5	0.14	M		5.3						

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Sample Analysis Report

Sample Name		Sampling Date	8-May-17	
ALS Sample ID	L1931034-2	Extraction Date	19-Jun-17	Approved:
Analysis Method	EPA 1668C	Sample Size	4.7 g	*E. Sabljic*
Analysis Type	Sample	Percent Moisture	6.7%	--e-signature--
Sample Matrix		Split Ratio	1	28-Jun-2017

Run Information	**Run 1**	**Run 2**
Filename	5-170626A13	5-170627A06
Run Date	26-Jun-17 21:05	27-Jun-17 15:42
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL
PCB-088/091		19.56	150	0.15			5.3						
PCB-084		19.71	134	0.18			5.3						
PCB-089		19.95	4.52	0.15	J		5.3						
PCB-121		20.08	2.87	0.10	J		5.3						
PCB-092		20.31	182	0.15			5.3						
PCB-090/101/113		20.62	827	0.13			5.3						
PCB-083/099		20.93	667	0.14			5.3						
PCB-112		NotFnd	<0.13	0.13	UJ		5.3						
PCB-086/087/097/109/119/125		21.23	380	0.13	M		5.3						
PCB-085/110/115/116/117		21.70	847	0.12	M		5.3						
PCB-082		21.90	44.6	0.17			5.3						
PCB-111		22.03	<2.2	0.11	J,NJ	2.2	5.3						
PCB-120		22.26	10.5	0.11			5.3						
PCB-108/124		22.88	19.8	0.20			5.3						
PCB-107		23.02	73.5	0.19	M		5.3						
PCB-123	0.00003	23.08	5.65	0.20	M		5.3						
PCB-106		NotFnd	<0.21	0.21	UJ		5.3						
PCB-118	0.00003	23.26	484	0.18			5.3						
PCB-122								23.43	<2.9	1.2	J,NJ	2.9	53
PCB-114	0.00003	23.56	10.0	0.18			5.3						
PCB-105	0.00003	23.90	158	0.19			5.3						
PCB-127		24.66	1.59	0.20	J		5.3						
PCB-126	0.1	25.51	1.60	0.21	M,J		5.3						
PCB-155		20.49	13.5	0.034			5.3						
PCB-152		NotFnd	<0.036	0.036	UJ		5.3						
PCB-150		20.72	6.73	0.037	M		5.3						
PCB-136		20.95	96.2	0.039			5.3						
PCB-145		21.08	<0.17	0.039	J,NJ	0.17	5.3						
PCB-148		21.81	8.11	0.050			5.3						
PCB-135/151		22.16	376	0.050			5.3						
PCB-154		22.26	46.8	0.047			5.3						
PCB-144		22.45	31.3	0.048			5.3						
PCB-147/149		22.65	956	0.21			5.3						
PCB-134/143		22.79	37.3	0.23			5.3						
PCB-139/140		22.97	24.7	0.21			5.3						
PCB-131		23.10	6.21	0.23			5.3						
PCB-142		NotFnd	<0.23	0.23	UJ		5.3						
PCB-132								23.33	217	1.5			53
PCB-133		23.54	42.7	0.22			5.3						
PCB-165		23.74	5.80	0.18			5.3						
PCB-146		23.87	322	0.20			5.3						
PCB-161		NotFnd	<0.17	0.17	UJ		5.3						
PCB-153/168		24.20	1460	0.18			5.3						
PCB-141		24.33	152	0.25			5.3						
PCB-130		24.54	77.4	0.25			5.3						
PCB-137/164		24.71	112	0.20			5.3						
PCB-129/138/163		24.87	1350	0.21			5.3						
PCB-160		NotFnd	<0.16	0.16	UJ		5.3						
PCB-158								25.07	75.2	1.1			53
PCB-128/166		25.56	174	0.20			5.3						
PCB-159								26.01	8.48	1.0	J		53
PCB-162		26.15	6.53	0.17			5.3						
PCB-167	0.00003	26.42	34.3	0.15			5.3						
PCB-156/157	0.00003	27.02	66.2	0.19			11						
PCB-169	0.03	28.72	<1.9	0.17	J,NJ	1.9	5.3						
PCB-188		23.51	<3.2	0.062	J,NJ	3.2	5.3						
PCB-179		23.71	118	0.075			5.3						
PCB-184		23.95	7.97	0.068			5.3						
PCB-176		24.17	23.1	0.072			5.3						
PCB-186		NotFnd	<0.077	0.077	UJ		5.3						
PCB-178								25.07	105	1.4			53
PCB-175		25.41	<11	0.097	NJ	11	5.3						
PCB-187		25.55	492	0.082			5.3						
PCB-182		25.64	2.62	0.10	J		5.3						
PCB-183								25.84	<140	1.3	NJ	140	53
PCB-185								25.94	11.4	1.3	M,J		53
PCB-174								26.01	216	1.6	M		53
PCB-177		26.25	146	0.10			5.3						
PCB-181		26.45	<2.0	0.10	J,NJ	2.0	5.3						
PCB-171/173		26.58	72.3	0.11			5.3						
PCB-172		27.37	48.2	0.11			5.3						

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-2	Sampling Date	8-May-17	
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17	
Analysis Type	Sample	Sample Size	4.7	g
Sample Matrix		Percent Moisture	6.7%	
		Split Ratio	1	

Approved:
E. Sabljic
--e-signature--
28-Jun-2017

Run Information	**Run 1**	**Run 2**
Filename	5-170626A13	5-170627A06
Run Date	26-Jun-17 21:05	27-Jun-17 15:42
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Run 1 Ret. Time**	**Run 1 Conc. pg/g**	**Run 1 EDL pg/g**	**Run 1 Flags**	**Run 1 EMPC pg/g**	**Run 1 LQL**	**Run 2 Ret. Time**	**Run 2 Conc. pg/g**	**Run 2 EDL pg/g**	**Run 2 Flags**	**Run 2 EMPC pg/g**	**Run 2 LQL**
PCB-192		27.53	<0.15	0.093	J,NJ	0.15	5.3						
PCB-180/193		27.71	546	0.095			5.3						
PCB-191		27.89	7.42	0.084			5.3						
PCB-170		28.40	197	0.11			5.3						
PCB-190		28.68	<37	0.079	NJ	37	5.3						
PCB-189	0.00003	30.00	7.53	0.079			5.3						
PCB-202		26.28	48.1	0.048			5.3						
PCB-201								26.74	23.8	0.85	J		53
PCB-204		27.11	<0.47	0.048	J,NJ	0.47	5.3						
PCB-197		27.22	7.43	0.053			5.3						
PCB-200		27.32	9.23	0.051			5.3						
PCB-198/199		28.73	160	0.075			5.3						
PCB-196		29.06	60.6	0.080			5.3						
PCB-203		29.16	86.1	0.070			5.3						
PCB-195								29.87	38.6	0.94	J		53
PCB-194		31.12	101	0.13			5.3						
PCB-205								31.38	<3.7	0.77	J,NJ	3.7	53
PCB-208		29.72	30.2	0.26			5.3						
PCB-207		30.21	12.1	0.29			5.3						
PCB-206		32.49	59.5	0.45			5.3						
PCB-209		33.64	76.3	0.086			5.3						

Extraction Standards	**pg**	**Run 1 Time**	**Run 1 % Rec**	**Run 1 Limits**	**Run 2 Time**	**Run 2 % Rec**	**Run 2 Limits**
13C12-PCB-001	2000	8.83	42	5-145			
13C12-PCB-003	2000	10.36	47	5-145			
13C12-PCB-004	2000	10.52	54	5-145			
13C12-PCB-015	2000	14.23	73	5-145			
13C12-PCB-019	2000	12.55	56	5-145			
13C12-PCB-037	2000	18.18	67	5-145			
13C12-PCB-054	2000	14.41	59	5-145			
13C12-PCB-081	2000	21.77	71	5-145			
13C12-PCB-077	2000	22.06	67	5-145			
13C12-PCB-104	2000	17.47	67	5-145			
13C12-PCB-123	2000	23.06	76	5-145			
13C12-PCB-118	2000	23.25	75	5-145			
13C12-PCB-114	2000	23.54	76	5-145			
13C12-PCB-105	2000	23.89	75	5-145			
13C12-PCB-126	2000	25.48	72	5-145			
13C12-PCB-155	2000	20.47	59	5-145			
13C12-PCB-167	2000	26.40	66	5-145			
13C12-PCB-156/157	4000	27.02	67	5-145			
13C12-PCB-169	2000	28.70	64	5-145			
13C12-PCB-188	2000	23.49	65	5-145			
13C12-PCB-189	2000	29.98	65	5-145			
13C12-PCB-202	2000	26.27	61	5-145			
13C12-PCB-205	2000	31.38	68	5-145			
13C12-PCB-208	2000	29.72	67	5-145			
13C12-PCB-206	2000	32.48	70	5-145			
13C12-PCB-209	2000	33.60	95	5-145			
Cleanup Standards							
13C12-PCB-028	2000	15.94	66	5-145			
13C12-PCB-111	2000	22.01	58	5-145			
13C12-PCB-178	2000	25.07	59	5-145			

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Sample Analysis Report

Sample Name		Sampling Date	8-May-17		
ALS Sample ID	L1931034-2	Extraction Date	19-Jun-17		Approved:
Analysis Method	EPA 1668C	Sample Size	4.7	g	*E. Sabljic*
Analysis Type	Sample	Percent Moisture	6.7%		--e-signature--
Sample Matrix		Split Ratio	1		28-Jun-2017

Run Information	**Run 1**	**Run 2**
Filename	5-170626A13	5-170627A06
Run Date	26-Jun-17 21:05	27-Jun-17 15:42
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
Homologue Group Totals													
Total MonoCB			11.9	0.10	J		5.3						
Total DiCB			175	0.064	J		5.3						
Total TriCB			831	0.035	J		5.3						
Total TetraCB			2960	0.059	J		5.3						
Total PentaCB			4640	0.029	J		5.3						
Total HexaCB			5710	0.034	J		5.3						
Total HeptaCB			2190	0.062	J		5.3						
Total OctaCB			539	0.048	J		5.3						
Total NonaCB			102	0.26	J		5.3						
DecaCB			76.3	0.086	J		5.3						
Total PCB			17200		J								
Toxic Equivalency - (WHO 2005)													
Lower Bound PCB TEQ			0.184										
Mid Point PCB TEQ			0.241										
Upper Bound PCB TEQ			0.241										

EDL	Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.
TEF	Indicates the Toxic Equivalency Factor TEQ Indicates the Toxic Equivalency
LQL	Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.
M	Indicates that a peak has been manually integrated.
UJ	Indicates that this compound was not detected above the EDL.
J	indicates that the analyte was positively identifed. The associated numerical result is an estimate.
NJ	Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.
B	Indicates that this target was detected in the blank at greater than 10% of the sample concentration.
EMPC	Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-3	Sampling Date	8-May-17		
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		Approved:
Analysis Type	Sample	Sample Size	4.78	g	*E. Sabljic*
Sample Matrix		Percent Moisture	5.7%		--e-signature--
		Split Ratio	1		28-Jun-2017

Run Information	**Run 1**	**Run 2**
Filename	5-170626A14	5-170627A07
Run Date	26-Jun-17 21:44	27-Jun-17 16:22
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL
PCB-001		8.83	2.55	0.084	J		5.2						
PCB-002		10.23	3.33	0.080	J		5.2						
PCB-003		10.36	1.78	0.086	J,B		5.2						
PCB-004		10.54	13.2	0.11			5.2						
PCB-010		10.64	0.915	0.069	J		5.2						
PCB-009		11.81	2.82	0.067	J		5.2						
PCB-007		11.91	<1.2	0.062	J,NJ	1.2	5.2						
PCB-006		12.07	6.47	0.064			5.2						
PCB-005		NotFnd	<0.071	0.071	UJ		5.2						
PCB-008		12.35	32.1	0.066			5.2						
PCB-014		13.32	0.266	0.055	J		5.2						
PCB-011		13.83	92.9	0.061	B		5.2						
PCB-012/013		14.03	2.40	0.063	J,B		5.2						
PCB-015		14.23	10.2	0.054	B		5.2						
PCB-019		12.55	10.4	0.080			5.2						
PCB-018/030		13.65	109	0.073			5.2						
PCB-017		13.90	69.3	0.096			5.2						
PCB-027		14.03	12.9	0.059			5.2						
PCB-024		14.11	1.44	0.062	M,J		5.2						
PCB-016		14.19	38.1	0.11	M		5.2						
PCB-032		14.49	30.5	0.053			5.2						
PCB-034		15.18	2.48	0.091	J		5.2						
PCB-023		15.28	<0.44	0.093	J,NJ	0.44	5.2						
PCB-026/029		15.45	50.2	0.11			5.2						
PCB-025		15.59	21.9	0.084			5.2						
PCB-031		15.77	192	0.084			5.2						
PCB-020/028		15.94	335	0.096	M		5.2						
PCB-021/033		16.09	73.1	0.089	M		5.2						
PCB-022		16.32	65.2	0.099			5.2						
PCB-036		17.14	1.05	0.080	J,B		5.2						
PCB-039		17.37	2.25	0.094	J		5.2						
PCB-038		17.69	<0.34	0.088	J,NJ	0.34	5.2						
PCB-035		17.95	1.77	0.094	J,B		5.2						
PCB-037		18.18	22.4	0.099	B		5.2						
PCB-054		14.41	1.17	0.053	J		5.2						
PCB-050/053		15.61	76.3	0.084			5.2						
PCB-045/051		16.02	72.9	0.088			5.2						
PCB-046		16.20	<16	0.11	NJ	16	5.2						
PCB-052		16.94	868	0.091			5.2						
PCB-073		NotFnd	<0.060	0.060	UJ		5.2						
PCB-043		17.08	<9.9	0.11	NJ	9.9	5.2						
PCB-049/069		17.21	428	0.070			5.2						
PCB-048		17.37	49.0	0.087			5.2						
PCB-044/047/065		17.50	577	0.081			5.2						
PCB-059/062/075		17.69	47.1	0.066			5.2						
PCB-042		17.80	128	0.092			5.2						
PCB-040/041/071		18.06	201	0.086			5.2						
PCB-064		18.20	211	0.063			5.2						
PCB-072		18.60	<13	0.21	NJ	13	5.2						
PCB-068		18.76	17.9	0.17			5.2						
PCB-057		18.99	3.48	0.20	J		5.2						
PCB-058		NotFnd	<0.20	0.20	UJ		5.2						
PCB-067		19.22	10.1	0.19			5.2						
PCB-063		19.36	<23	0.20	NJ	23	5.2						
PCB-061/070/074/076		19.54	658	0.21			5.2						
PCB-066		19.72	387	0.20			5.2						
PCB-055		19.82	2.62	0.21	J		5.2						
PCB-056		20.10	101	0.20			5.2						
PCB-060		20.23	75.3	0.21			5.2						
PCB-080		20.36	0.699	0.20	M,J		5.2						
PCB-079		21.23	9.61	0.19			5.2						
PCB-078		NotFnd	<0.21	0.21	UJ		5.2						
PCB-081	0.0003	21.75	0.585	0.18	M,J		5.2						
PCB-077	0.0001	22.08	13.7	0.19			5.2						
PCB-104		17.47	0.607	0.030	J		5.2						
PCB-096		17.70	4.00	0.032	M,J		5.2						
PCB-103		18.69	25.7	0.12			5.2						
PCB-094		18.84	6.75	0.14			5.2						
PCB-095		19.09	759	0.14	M		5.2						
PCB-093/098/100/102		19.17	47.9	0.13	M		5.2						

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-3	Sampling Date	8-May-17		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.78	g	--e-signature--
Sample Matrix		Percent Moisture	5.7%		28-Jun-2017
		Split Ratio	1		

Run Information	**Run 1**	**Run 2**
Filename	5-170626A14	5-170627A07
Run Date	26-Jun-17 21:44	27-Jun-17 16:22
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL
PCB-088/091		19.54	201	0.13			5.2						
PCB-084		19.69	173	0.16			5.2						
PCB-089		19.94	5.56	0.14			5.2						
PCB-121		20.08	3.23	0.094	J		5.2						
PCB-092		20.31	257	0.14			5.2						
PCB-090/101/113		20.62	1150	0.12			5.2						
PCB-083/099		20.93	888	0.13			5.2						
PCB-112		NotFnd	<0.11	0.11	UJ		5.2						
PCB-086/087/097/109/119/125		21.21	529	0.12	M		5.2						
PCB-085/110/115/116/117		21.68	1160	0.11	M		5.2						
PCB-082		21.88	61.3	0.16			5.2						
PCB-111		22.01	2.91	0.099	J		5.2						
PCB-120		22.26	14.1	0.096			5.2						
PCB-108/124								22.88	23.7	1.1	J		52
PCB-107								23.02	96.5	1.2	M		52
PCB-123	0.00003							23.06	<10	1.1	M,J,NJ	10	52
PCB-106								NotFnd	<1.2	1.2	U		52
PCB-118	0.00003							23.25	661	1.1	M		52
PCB-122								23.44	5.52	1.2	J		52
PCB-114	0.00003							23.56	<12	1.1	J,NJ	12	52
PCB-105	0.00003							23.90	221	1.1			52
PCB-127								24.64	<1.4	1.0	M,J,NJ	1.4	52
PCB-126	0.1							25.50	<2.0	1.2	M,J,NJ	2.0	52
PCB-155		20.47	5.75	0.050			5.2						
PCB-152		NotFnd	<0.056	0.056	UJ		5.2						
PCB-150		20.70	6.99	0.057	M		5.2						
PCB-136		20.93	109	0.060			5.2						
PCB-145		21.06	0.151	0.061	J		5.2						
PCB-148		21.81	9.00	0.077			5.2						
PCB-135/151		22.16	463	0.077			5.2						
PCB-154		22.26	59.7	0.072			5.2						
PCB-144		22.45	39.9	0.074			5.2						
PCB-147/149								22.65	1130	2.1			52
PCB-134/143								22.79	39.2	2.3	J		52
PCB-139/140								22.97	30.3	2.0	J		52
PCB-131								23.10	7.49	2.3	J		52
PCB-142								NotFnd	<2.3	2.3	UJ		52
PCB-132								23.34	262	2.2			52
PCB-133								23.52	47.3	2.2	J		52
PCB-165								23.74	<5.8	1.7	J,NJ	5.8	52
PCB-146								23.87	355	1.8			52
PCB-161								NotFnd	<1.7	1.7	UJ		52
PCB-153/168								24.18	1840	1.7			52
PCB-141								24.31	164	2.4			52
PCB-130								24.54	79.5	2.3			52
PCB-137/164								24.71	129	1.9			52
PCB-129/138/163								24.87	1580	2.0			52
PCB-160								NotFnd	<1.6	1.6	UJ		52
PCB-158								25.07	92.4	1.6			52
PCB-128/166								25.56	200	1.8			52
PCB-159								26.01	9.78	1.5	J		52
PCB-162								26.15	7.18	1.6	J		52
PCB-167	0.00003							26.40	<37	1.5	J,NJ	37	52
PCB-156/157	0.00003							27.02	74.2	1.8	J		100
PCB-169	0.03							28.72	<1.7	1.7	M,UJ	0.99	52
PCB-188								23.49	3.43	0.44	J		52
PCB-179								23.71	120	0.57			52
PCB-184								23.95	4.98	0.51	J		52
PCB-176								24.17	24.6	0.55	J		52
PCB-186								NotFnd	<0.58	0.58	UJ		52
PCB-178								25.07	<100	0.77	NJ	100	52
PCB-175								25.40	14.8	0.73	J		52
PCB-187								25.55	589	0.64			52
PCB-182								NotFnd	<0.71	0.71	UJ		52
PCB-183								25.86	181	0.70	M		52
PCB-185								25.94	<11	0.70	M,J,NJ	11	52
PCB-174								26.01	<210	0.84	M,NJ	210	52
PCB-177								26.24	<120	0.77	NJ	120	52
PCB-181								26.45	<2.4	0.72	J,NJ	2.4	52
PCB-171/173								26.56	<63	0.82	NJ	63	52
PCB-172								27.37	41.5	0.75	J		52

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-3	Sampling Date	8-May-17		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.78	g	--e-signature--
Sample Matrix		Percent Moisture	5.7%		28-Jun-2017
		Split Ratio	1		

Run Information	**Run 1**	**Run 2**
Filename	5-170626A14	5-170627A07
Run Date	26-Jun-17 21:44	27-Jun-17 16:22
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
PCB-192								NotFnd	<0.63	0.63	UJ		52
PCB-180/193								27.70	575	0.66			52
PCB-191								27.89	8.33	0.58	J		52
PCB-170								28.39	196	0.80			52
PCB-190								28.67	<34	0.53	J,NJ	34	52
PCB-189	0.00003							29.98	9.20	1.2	J		52
PCB-202								26.28	<44	0.54	J,NJ	44	52
PCB-201								26.74	24.4	0.61	J		52
PCB-204								NotFnd	<0.55	0.55	UJ		52
PCB-197								27.20	<6.9	0.60	J,NJ	6.9	52
PCB-200								27.30	9.96	0.60	J		52
PCB-198/199								28.72	158	0.82			52
PCB-196								29.06	57.8	0.86			52
PCB-203								29.16	97.0	0.78			52
PCB-195								29.88	39.7	1.0	J		52
PCB-194								31.11	100	1.1			52
PCB-205								31.38	<5.9	0.91	J,NJ	5.9	52
PCB-208								29.72	28.8	2.0	J		52
PCB-207								30.19	13.3	2.5	J		52
PCB-206								32.48	61.3	3.8			52
PCB-209								33.62	69.6	1.0			52

Extraction Standards	**pg**	**Time**	**% Rec**	**Limits**	**Time**	**% Rec**	**Limits**
13C12-PCB-001	2000	8.82	55	5-145			
13C12-PCB-003	2000	10.34	55	5-145			
13C12-PCB-004	2000	10.52	60	5-145			
13C12-PCB-015	2000	14.21	76	5-145			
13C12-PCB-019	2000	12.53	57	5-145			
13C12-PCB-037	2000	18.16	70	5-145			
13C12-PCB-054	2000	14.39	62	5-145			
13C12-PCB-081	2000	21.75	73	5-145			
13C12-PCB-077	2000	22.06	71	5-145			
13C12-PCB-104	2000	17.46	69	5-145			
13C12-PCB-123	2000				23.06	78	5-145
13C12-PCB-118	2000				23.25	78	5-145
13C12-PCB-114	2000				23.54	78	5-145
13C12-PCB-105	2000				23.89	76	5-145
13C12-PCB-126	2000				25.48	72	5-145
13C12-PCB-155	2000	20.46	65	5-145			
13C12-PCB-167	2000				26.38	71	5-145
13C12-PCB-156/157	4000				27.02	73	5-145
13C12-PCB-169	2000				28.68	70	5-145
13C12-PCB-188	2000				23.48	76	5-145
13C12-PCB-189	2000				29.97	75	5-145
13C12-PCB-202	2000				26.27	72	5-145
13C12-PCB-205	2000				31.37	72	5-145
13C12-PCB-208	2000				29.70	69	5-145
13C12-PCB-206	2000				32.46	68	5-145
13C12-PCB-209	2000				33.59	87	5-145

Cleanup Standards				
13C12-PCB-028	2000	15.92	77	5-145
13C12-PCB-111	2000	21.99	69	5-145
13C12-PCB-178	2000	25.05	72	5-145

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Sample Analysis Report

Sample Name		Sampling Date	8-May-17		
ALS Sample ID	L1931034-3	Extraction Date	19-Jun-17		Approved:
Analysis Method	EPA 1668C	Sample Size	4.78	g	*E. Sabljic*
Analysis Type	Sample	Percent Moisture	5.7%		--e-signature--
Sample Matrix		Split Ratio	1		28-Jun-2017

Run Information	**Run 1**	**Run 2**
Filename	5-170626A14	5-170627A07
Run Date	26-Jun-17 21:44	27-Jun-17 16:22
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
Homologue Group Totals													
Total MonoCB			7.66	0.080	J		5.2						
Total DiCB			162	0.054	J		5.2						
Total TriCB			1040	0.053	J		5.2						
Total TetraCB			4000	0.053	J		5.2						
Total PentaCB			6320	0.030	J		5.2						
Total HexaCB			6780	0.050	J		5.2						
Total HeptaCB			2310	0.44	J		52						
Total OctaCB			544	0.54	J		52						
Total NonaCB			103	2.0	J		52						
DecaCB			69.6	1.0	J		52						
Total PCB			21300		J								
Toxic Equivalency - (WHO 2005)													
Lower Bound PCB TEQ			0.0305										
Mid Point PCB TEQ			0.258										
Upper Bound PCB TEQ			0.283										

EDL	Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.
TEF	Indicates the Toxic Equivalency Factor TEQ Indicates the Toxic Equivalency
LQL	Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.
M	Indicates that a peak has been manually integrated.
UJ	Indicates that this compound was not detected above the EDL.
J	indicates that the analyte was positively identifed. The associated numerical result is an estimate.
NJ	Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.
B	Indicates that this target was detected in the blank at greater than 10% of the sample concentration.
EMPC	Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure

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Sample Analysis Report

Sample Name

ALS Sample ID	WG2539476-4	Sampling Date	n/a		
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		Approved:
Analysis Type	Sample	Sample Size	4.78	g	*E. Sabljic*
Sample Matrix		Percent Moisture	5.7%		--e-signature--
		Split Ratio	1		28-Jun-2017

Run Information	**Run 1**	**Run 2**
Filename	5-170626A15	5-170627A08
Run Date	26-Jun-17 22:24	27-Jun-17 17:02
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
PCB-001		8.83	2.50	0.10	J		5.2						
PCB-002		10.23	3.61	0.099	J		5.2						
PCB-003		10.36	2.12	0.11	J,B		5.2						
PCB-004		10.54	12.8	0.16			5.2						
PCB-010		10.64	0.803	0.098	J		5.2						
PCB-009		11.81	3.32	0.095	J		5.2						
PCB-007		11.91	1.44	0.089	J		5.2						
PCB-006		12.07	6.69	0.091			5.2						
PCB-005		NotFnd	<0.10	0.10	UJ		5.2						
PCB-008		12.35	33.0	0.095			5.2						
PCB-014		13.32	0.491	0.047	J		5.2						
PCB-011		13.83	115	0.052	B		5.2						
PCB-012/013		14.03	2.95	0.054	J,B		5.2						
PCB-015		14.23	11.8	0.047	B		5.2						
PCB-019		12.55	10.6	0.078			5.2						
PCB-018/030		13.65	110	0.077			5.2						
PCB-017		13.90	70.6	0.10			5.2						
PCB-027		14.03	12.9	0.063	M		5.2						
PCB-024		14.11	1.26	0.065	M,J		5.2						
PCB-016		14.19	41.5	0.12	M		5.2						
PCB-032		14.49	32.4	0.056			5.2						
PCB-034		15.18	2.64	0.089	J		5.2						
PCB-023		15.28	<0.46	0.091	J,NJ	0.46	5.2						
PCB-026/029		15.45	52.7	0.10			5.2						
PCB-025		15.59	22.3	0.082			5.2						
PCB-031		15.77	200	0.081			5.2						
PCB-020/028		15.94	341	0.093			5.2						
PCB-021/033		16.09	77.7	0.086			5.2						
PCB-022		16.32	69.4	0.096			5.2						
PCB-036		17.14	1.30	0.078	M,J,B		5.2						
PCB-039		17.36	2.36	0.092	J		5.2						
PCB-038		17.69	<0.51	0.085	J,NJ	0.51	5.2						
PCB-035		17.95	3.67	0.091	J,B		5.2						
PCB-037		18.18	28.8	0.097			5.2						
PCB-054		14.41	1.15	0.051	J		5.2						
PCB-050/053		15.61	75.7	0.052			5.2						
PCB-045/051		16.02	72.8	0.054			5.2						
PCB-046		16.20	<17	0.066	NJ	17	5.2						
PCB-052		16.94	864	0.056			5.2						
PCB-073		NotFnd	<0.037	0.037	UJ		5.2						
PCB-043		17.08	<12	0.065	NJ	12	5.2						
PCB-049/069		17.21	423	0.043			5.2						
PCB-048		17.37	50.9	0.053			5.2						
PCB-044/047/065		17.50	574	0.050			5.2						
PCB-059/062/075		17.69	46.8	0.040			5.2						
PCB-042		17.80	130	0.056			5.2						
PCB-040/041/071		18.06	209	0.053			5.2						
PCB-064		18.20	214	0.038			5.2						
PCB-072		18.60	<13	1.1	NJ	13	5.2						
PCB-068		18.76	18.0	0.94			5.2						
PCB-057		18.99	3.38	1.1	J		5.2						
PCB-058		NotFnd	<1.1	1.1	UJ		5.2						
PCB-067		19.22	10.1	1.0			5.2						
PCB-063		19.36	<23	1.1	NJ	23	5.2						
PCB-061/070/074/076		19.54	675	1.2			5.2						
PCB-066		19.72	401	1.1			5.2						
PCB-055		19.84	2.55	1.2	J		5.2						
PCB-056		20.10	107	1.1	M		5.2						
PCB-060		20.23	79.7	1.1	M		5.2						
PCB-080		20.36	<1.1	1.1	M,UJ		5.2						
PCB-079		21.23	7.80	1.0			5.2						
PCB-078		NotFnd	<1.1	1.1	UJ		5.2						
PCB-081	0.0003	21.75	<1.0	1.0	M,UJ		5.2						
PCB-077	0.0001	22.08	15.6	1.1			5.2						
PCB-104		17.47	0.623	0.036	J		5.2						
PCB-096		17.70	3.98	0.039	J		5.2						
PCB-103		18.69	25.5	0.067			5.2						
PCB-094		18.84	6.79	0.077			5.2						
PCB-095		19.09	755	0.080	M		5.2						
PCB-093/098/100/102		19.17	48.3	0.073	M		5.2						

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Sample Analysis Report

Sample Name

ALS Sample ID	WG2539476-4	Sampling Date	n/a	
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17	
Analysis Type	Sample	Sample Size	4.78	g
Sample Matrix		Percent Moisture	5.7%	
		Split Ratio	1	

Approved:
E. Sabljic
--e-signature--
28-Jun-2017

Run Information	**Run 1**	**Run 2**
Filename	5-170626A15	5-170627A08
Run Date	26-Jun-17 22:24	27-Jun-17 17:02
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL
PCB-088/091		19.54	196	0.075			5.2						
PCB-084		19.69	177	0.090			5.2						
PCB-089		19.94	5.91	0.078			5.2						
PCB-121		20.08	3.62	0.052	J		5.2						
PCB-092		20.31	258	0.076			5.2						
PCB-090/101/113		20.62	1160	0.068			5.2						
PCB-083/099		20.93	900	0.072			5.2						
PCB-112		NotFnd	<0.064	0.064	UJ		5.2						
PCB-086/087/097/109/119/125		21.21	540	0.066	M		5.2						
PCB-085/110/115/116/117		21.68	1180	0.060	M		5.2						
PCB-082		21.88	63.9	0.088			5.2						
PCB-111		22.01	2.56	0.055	J		5.2						
PCB-120		22.26	14.2	0.054			5.2						
PCB-108/124								22.88	22.6	1.0	J		52
PCB-107								23.02	98.1	1.2	M		52
PCB-123	0.00003							23.06	<9.2	1.1	M,J,NJ	9.2	52
PCB-106								NotFnd	<1.1	1.1	UJ		52
PCB-118	0.00003							23.25	674	1.0	M		52
PCB-122								23.44	<5.0	1.1	J,NJ	5.0	52
PCB-114	0.00003							23.54	14.2	1.0	J		52
PCB-105	0.00003							23.89	218	1.1			52
PCB-127								24.61	<1.7	1.0	M,J,NJ	1.7	52
PCB-126	0.1							25.51	<3.1	1.2	M,J,NJ	3.1	52
PCB-155		20.47	5.87	0.032			5.2						
PCB-152		NotFnd	<0.034	0.034	UJ		5.2						
PCB-150		20.70	6.79	0.035	M		5.2						
PCB-136		20.93	107	0.036			5.2						
PCB-145		21.08	0.0699	0.037	J		5.2						
PCB-148		21.80	9.23	0.047			5.2						
PCB-135/151		22.16	454	0.047			5.2						
PCB-154		22.26	58.2	0.044			5.2						
PCB-144		22.45	40.9	0.045			5.2						
PCB-147/149								22.64	1140	0.91	M		52
PCB-134/143								22.77	47.6	1.0	M,J		52
PCB-139/140								22.95	27.0	0.90	J		52
PCB-131								23.08	7.85	1.0	J		52
PCB-142								NotFnd	<1.0	1.0	UJ		52
PCB-132								23.33	266	0.96			52
PCB-133								23.52	47.3	0.96	J		52
PCB-165								23.72	5.46	0.75	J		52
PCB-146								23.87	349	0.80			52
PCB-161								NotFnd	<0.75	0.75	UJ		52
PCB-153/168								24.18	1860	0.74			52
PCB-141								24.31	161	1.0			52
PCB-130								24.53	77.2	1.0			52
PCB-137/164								24.69	130	0.85			52
PCB-129/138/163								24.87	1580	0.88			52
PCB-160								NotFnd	<0.70	0.70	UJ		52
PCB-158								25.07	87.7	0.72			52
PCB-128/166								25.55	195	0.80			52
PCB-159								26.01	9.20	0.68	J		52
PCB-162								26.15	6.05	0.70	J		52
PCB-167	0.00003							26.40	41.2	0.64	J		52
PCB-156/157	0.00003							27.02	72.8	0.82	J		100
PCB-169	0.03							28.70	<3.1	0.74	M,J,NJ	3.1	52
PCB-188								23.49	3.27	0.50	J		52
PCB-179								23.71	128	0.65			52
PCB-184								23.94	<4.4	0.58	J,NJ	4.4	52
PCB-176								24.17	27.8	0.63	J		52
PCB-186								NotFnd	<0.66	0.66	UJ		52
PCB-178								25.07	115	0.88			52
PCB-175								25.40	15.3	0.83	J		52
PCB-187								25.53	592	0.73			52
PCB-182								NotFnd	<0.81	0.81	UJ		52
PCB-183								25.84	189	0.80	M		52
PCB-185								25.94	13.0	0.79	M,J		52
PCB-174								26.01	<210	0.96	M,NJ	210	52
PCB-177								26.24	<130	0.88	NJ	130	52
PCB-181								26.45	<1.6	0.83	J,NJ	1.6	52
PCB-171/173								26.56	<73	0.93	NJ	73	52
PCB-172								27.35	<41	0.86	J,NJ	41	52

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Sample Analysis Report

Sample Name		Sampling Date	n/a		
ALS Sample ID	WG2539476-4	Extraction Date	19-Jun-17		Approved:
Analysis Method	EPA 1668C	Sample Size	4.78	g	*E. Sabljic*
Analysis Type	Sample	Percent Moisture	5.7%		--e-signature--
Sample Matrix		Split Ratio	1		28-Jun-2017

Run Information	**Run 1**	**Run 2**
Filename	5-170626A15	5-170627A08
Run Date	26-Jun-17 22:24	27-Jun-17 17:02
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
PCB-192								NotFnd	<0.71	0.71	UJ		52
PCB-180/193								27.70	587	0.75			52
PCB-191								27.88	8.89	0.66	J		52
PCB-170								28.39	202	0.91			52
PCB-190								28.67	<32	0.61	J,NJ	32	52
PCB-189	0.00003							29.98	<6.7	0.94	M,J,NJ	6.7	52
PCB-202								26.27	51.9	0.56	J		52
PCB-201								26.74	26.5	0.65	J		52
PCB-204								NotFnd	<0.59	0.59	UJ		52
PCB-197								27.20	7.65	0.64	J		52
PCB-200								27.30	12.8	0.64	J		52
PCB-198/199								28.72	167	0.87			52
PCB-196								29.04	63.3	0.92			52
PCB-203								29.14	96.4	0.84			52
PCB-195								29.87	40.1	1.1	J		52
PCB-194								31.11	98.3	1.1			52
PCB-205								31.38	6.25	0.99	J		52
PCB-208								29.72	<29	2.7	J,NJ	29	52
PCB-207								30.19	<15	3.2	J,NJ	15	52
PCB-206								32.46	59.6	4.8			52
PCB-209								33.62	70.6	0.98			52

Extraction Standards	**pg**	**Time**	**% Rec**	**Limits**	**Time**	**% Rec**	**Limits**
13C12-PCB-001	2000	8.82	57	5-145			
13C12-PCB-003	2000	10.34	56	5-145			
13C12-PCB-004	2000	10.52	61	5-145			
13C12-PCB-015	2000	14.21	79	5-145			
13C12-PCB-019	2000	12.53	60	5-145			
13C12-PCB-037	2000	18.16	72	5-145			
13C12-PCB-054	2000	14.39	66	5-145			
13C12-PCB-081	2000	21.75	76	5-145			
13C12-PCB-077	2000	22.06	76	5-145			
13C12-PCB-104	2000	17.46	72	5-145			
13C12-PCB-123	2000				23.06	81	5-145
13C12-PCB-118	2000				23.23	82	5-145
13C12-PCB-114	2000				23.52	82	5-145
13C12-PCB-105	2000				23.89	79	5-145
13C12-PCB-126	2000				25.48	80	5-145
13C12-PCB-155	2000	20.46	68	5-145			
13C12-PCB-167	2000				26.38	76	5-145
13C12-PCB-156/157	4000				27.01	77	5-145
13C12-PCB-169	2000				28.68	75	5-145
13C12-PCB-188	2000				23.48	77	5-145
13C12-PCB-189	2000				29.97	79	5-145
13C12-PCB-202	2000				26.25	73	5-145
13C12-PCB-205	2000				31.37	75	5-145
13C12-PCB-208	2000				29.70	71	5-145
13C12-PCB-206	2000				32.44	73	5-145
13C12-PCB-209	2000				33.59	91	5-145

Cleanup Standards				
13C12-PCB-028	2000	15.92	81	5-145
13C12-PCB-111	2000	21.99	75	5-145
13C12-PCB-178	2000	25.05	73	5-145

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Sample Analysis Report

Sample Name

ALS Sample ID	WG2539476-4	Sampling Date	n/a		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.78	g	--e-signature--
Sample Matrix		Percent Moisture	5.7%		28-Jun-2017
		Split Ratio	1		

Run Information	**Run 1**	**Run 2**
Filename	5-170626A15	5-170627A08
Run Date	26-Jun-17 22:24	27-Jun-17 17:02
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
Homologue Group Totals													
Total MonoCB			8.23	0.099	J		5.2						
Total DiCB			188	0.047	J		5.2						
Total TriCB			1080	0.056	J		5.2						
Total TetraCB			4050	0.037	J		5.2						
Total PentaCB			6390	0.036	J		5.2						
Total HexaCB			6800	0.032	J		5.2						
Total HeptaCB			2380	0.50	J		52						
Total OctaCB			570	0.56	J		52						
Total NonaCB			104	2.7	J		52						
DecaCB			70.6	0.98	J		52						
Total PCB			21600		J								
Toxic Equivalency - (WHO 2005)													
Lower Bound PCB TEQ			0.0322										
Mid Point PCB TEQ			0.436										
Upper Bound PCB TEQ			0.436										

EDL	Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.
TEF	Indicates the Toxic Equivalency Factor TEQ Indicates the Toxic Equivalency
LQL	Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.
M	Indicates that a peak has been manually integrated.
UJ	Indicates that this compound was not detected above the EDL.
J	indicates that the analyte was positively identifed. The associated numerical result is an estimate.
NJ	Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.
B	Indicates that this target was detected in the blank at greater than 10% of the sample concentration.
EMPC	Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure

ALS Life sciences

Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-4	Sampling Date	8-May-17		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.68	g	--e-signature--
Sample Matrix		Percent Moisture	8.3%		28-Jun-2017
		Split Ratio	1		

Run Information	**Run 1**	**Run 2**
Filename	5-170622B11	5-170624A06
Run Date	23-Jun-17 01:03	24-Jun-17 05:52
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
PCB-001		8.83	4.09	0.12	J		5.3						
PCB-002		10.23	2.76	0.13	J		5.3						
PCB-003		10.36	3.15	0.15	J,B		5.3						
PCB-004		10.54	18.4	0.36			5.3						
PCB-010		10.66	1.07	0.22	J		5.3						
PCB-009		11.81	2.57	0.21	J,B		5.3						
PCB-007		11.91	<2.0	0.22	J,NJ	2.0	5.3						
PCB-006		12.07	9.27	0.22			5.3						
PCB-005		12.27	1.02	0.23	M,J		5.3						
PCB-008		12.35	49.0	0.22	M		5.3						
PCB-014		NotFnd	<0.24	0.24	UJ		5.3						
PCB-011		13.85	89.3	0.26	B		5.3						
PCB-012/013		14.03	<1.9	0.27	J,NJ	1.9	5.3						
PCB-015		14.23	14.9	0.28			5.3						
PCB-019		12.55	12.0	0.21			5.3						
PCB-018/030		13.67	107	0.16			5.3						
PCB-017		13.91	62.0	0.20			5.3						
PCB-027		14.05	11.8	0.13			5.3						
PCB-024		14.13	1.26	0.14	M,J		5.3						
PCB-016		14.19	37.6	0.23	M		5.3						
PCB-032		14.49	31.8	0.12			5.3						
PCB-034		15.18	2.70	0.16	J		5.3						
PCB-023		15.28	<0.39	0.17	J,NJ	0.39	5.3						
PCB-026/029		15.46	46.4	0.19			5.3						
PCB-025		15.59	20.6	0.15			5.3						
PCB-031		15.77	193	0.16			5.3						
PCB-020/028		15.94	291	0.17			5.3						
PCB-021/033		16.09	72.7	0.16			5.3						
PCB-022		16.32	60.9	0.17			5.3						
PCB-036		NotFnd	<0.15	0.15	UJ		5.3						
PCB-039		17.37	1.83	0.17	J		5.3						
PCB-038		17.69	<0.38	0.16	J,NJ	0.38	5.3						
PCB-035		17.95	2.04	0.17	J,B		5.3						
PCB-037		18.18	<23	0.17	NJ	23	5.3						
PCB-054		14.41	1.22	0.14	J		5.3						
PCB-050/053		15.63	73.0	0.24			5.3						
PCB-045/051		16.02	69.4	0.25			5.3						
PCB-046		16.20	<15	0.30	NJ	15	5.3						
PCB-052		16.94	850	0.26			5.3						
PCB-073		NotFnd	<0.17	0.17	UJ		5.3						
PCB-043		17.08	10.8	0.26			5.3						
PCB-049/069		17.21	406	0.20			5.3						
PCB-048		17.37	47.7	0.24			5.3						
PCB-044/047/065		17.52	534	0.22			5.3						
PCB-059/062/075		17.69	44.3	0.18			5.3						
PCB-042		17.80	117	0.26			5.3						
PCB-040/041/071		18.08	192	0.24			5.3						
PCB-064		18.20	202	0.17			5.3						
PCB-072		18.60	<12	0.36	NJ	12	5.3						
PCB-068		18.76	<13	0.31	NJ	13	5.3						
PCB-057		19.00	3.09	0.36	J		5.3						
PCB-058		19.10	26.8	0.37			5.3						
PCB-067		19.22	9.91	0.33			5.3						
PCB-063		19.36	<21	0.34	NJ	21	5.3						
PCB-061/070/074/076		19.54	581	0.36	M		5.3						
PCB-066		19.72	345	0.35	M		5.3						
PCB-055		NotFnd	<0.37	0.37	UJ		5.3						
PCB-056		20.10	96.6	0.36			5.3						
PCB-060		20.23	62.1	0.36			5.3						
PCB-080		20.31	8.36	0.35			5.3						
PCB-079		21.23	7.82	0.32			5.3						
PCB-078		NotFnd	<0.35	0.35	UJ		5.3						
PCB-081	0.0003	21.70	10.4	0.31			5.3						
PCB-077	0.0001	22.06	12.2	0.35			5.3						
PCB-104		17.49	0.550	0.13	J		5.3						
PCB-096		17.72	3.93	0.13	J		5.3						
PCB-103		18.71	22.3	0.26			5.3						
PCB-094		18.84	6.70	0.29			5.3						
PCB-095		19.09	672	0.31			5.3						
PCB-093/098/100/102		19.17	44.5	0.27	M		5.3						

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-4	Sampling Date	8-May-17		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.68	g	--e-signature--
Sample Matrix		Percent Moisture	8.3%		28-Jun-2017
		Split Ratio	1		

Run Information	**Run 1**	**Run 2**
Filename	5-170622B11	5-170624A06
Run Date	23-Jun-17 01:03	24-Jun-17 05:52
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL
PCB-088/091		19.56	177	0.28			5.3						
PCB-084		19.69	155	0.33			5.3						
PCB-089		19.95	5.30	0.30	J		5.3						
PCB-121		20.08	3.03	0.20	J		5.3						
PCB-092		20.31	219	0.28			5.3						
PCB-090/101/113		20.62	993	0.26			5.3						
PCB-083/099		20.93	756	0.27			5.3						
PCB-112		NotFnd	<0.23	0.23	UJ		5.3						
PCB-086/087/097/109/119/125		21.21	454	0.24	M		5.3						
PCB-085/110/115/116/117		21.68	1030	0.23	M		5.3						
PCB-082		21.88	56.5	0.33			5.3						
PCB-111		22.01	3.29	0.20	J		5.3						
PCB-120		22.26	12.4	0.19			5.3						
PCB-108/124		22.88	19.9	0.30			5.3						
PCB-107		23.02	73.1	0.29	M		5.3						
PCB-123	0.00003	23.06	8.46	0.33	M		5.3						
PCB-106		NotFnd	<0.31	0.31	UJ		5.3						
PCB-118	0.00003	23.25	603	0.30	M		5.3						
PCB-122		23.44	<4.0	0.33	J,NJ	4.0	5.3						
PCB-114	0.00003	23.54	<11	0.31	NJ	11	5.3						
PCB-105	0.00003	23.89	192	0.32			5.3						
PCB-127		24.64	<1.4	0.29	M,J,NJ	1.4	5.3						
PCB-126	0.1	25.48	2.16	0.35	M,J		5.3						
PCB-155		20.49	<4.4	0.23	J,NJ	4.4	5.3						
PCB-152		20.65	0.613	0.16	M,J		5.3						
PCB-150		20.72	7.80	0.15	M		5.3						
PCB-136		20.93	118	0.17			5.3						
PCB-145		21.08	<0.17	0.17	UJ		5.3						
PCB-148		21.81	10.1	0.21			5.3						
PCB-135/151		22.16	488	0.21	M		5.3						
PCB-154		22.26	64.0	0.18	M		5.3						
PCB-144		22.45	44.4	0.21			5.3						
PCB-147/149		22.64	1090	0.47			5.3						
PCB-134/143		22.77	40.4	0.51			5.3						
PCB-139/140		22.97	27.5	0.47			5.3						
PCB-131		23.08	7.31	0.50			5.3						
PCB-142		NotFnd	<0.54	0.54	UJ		5.3						
PCB-132		23.34	269	0.49			5.3						
PCB-133		23.52	46.8	0.50			5.3						
PCB-165		23.72	6.71	0.39			5.3						
PCB-146		23.87	389	0.45			5.3						
PCB-161		NotFnd	<0.36	0.36	UJ		5.3						
PCB-153/168		24.18	1800	0.39			5.3						
PCB-141		24.31	174	0.55			5.3						
PCB-130		24.53	90.1	0.57			5.3						
PCB-137/164		24.71	134	0.44			5.3						
PCB-129/138/163		24.87	1610	0.47			5.3						
PCB-160		NotFnd	<0.34	0.34	UJ		5.3						
PCB-158		25.07	83.3	0.36			5.3						
PCB-128/166		25.56	204	0.43			5.3						
PCB-159								26.02	11.5	3.6	J		53
PCB-162								26.15	6.94	3.7	J		53
PCB-167	0.00003	26.40	34.5	0.30			5.3						
PCB-156/157	0.00003	27.02	67.4	0.39			11						
PCB-169	0.03	28.70	2.82	0.34	J		5.3						
PCB-188		23.49	<2.9	0.17	J,NJ	2.9	5.3						
PCB-179		23.71	115	0.20			5.3						
PCB-184		23.95	2.92	0.17	J		5.3						
PCB-176		24.17	22.1	0.19			5.3						
PCB-186		NotFnd	<0.20	0.20	UJ		5.3						
PCB-178		25.07	98.1	0.26			5.3						
PCB-175		25.40	13.0	0.25			5.3						
PCB-187		25.55	485	0.21			5.3						
PCB-182		25.64	2.33	0.26	J		5.3						
PCB-183								25.86	189	1.3			53
PCB-185								25.96	<12	1.3	M,J,NJ	12	53
PCB-174								26.01	218	1.5	M		53
PCB-177		26.24	141	0.27			5.3						
PCB-181		26.45	1.93	0.25	J		5.3						
PCB-171/173		26.56	73.5	0.28			5.3						
PCB-172		27.37	44.9	0.26			5.3						

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-4	Sampling Date	8-May-17		
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		Approved:
Analysis Type	Sample	Sample Size	4.68	g	*E. Sabljic*
Sample Matrix		Percent Moisture	8.3%		--e-signature--
		Split Ratio	1		28-Jun-2017

Run Information	**Run 1**	**Run 2**
Filename	5-170622B11	5-170624A06
Run Date	23-Jun-17 01:03	24-Jun-17 05:52
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
PCB-192		NotFnd	<0.22	0.22	UJ		5.3						
PCB-180/193		27.71	566	0.23			5.3						
PCB-191		27.89	7.41	0.20			5.3						
PCB-170		28.39	196	0.28			5.3						
PCB-190		28.67	36.7	0.19			5.3						
PCB-189	0.00003	29.98	7.29	0.35			5.3						
PCB-202		26.28	45.1	0.11			5.3						
PCB-201								26.76	<20	0.79	J,NJ	20	53
PCB-204		27.09	<0.38	0.11	J,NJ	0.38	5.3						
PCB-197		27.22	5.78	0.11			5.3						
PCB-200		27.30	<8.3	0.12	NJ	8.3	5.3						
PCB-198/199		28.72	144	0.16			5.3						
PCB-196		29.06	54.7	0.16			5.3						
PCB-203		29.16	86.2	0.16			5.3						
PCB-195								29.88	30.9	2.1	J		53
PCB-194		31.11	100	0.24			5.3						
PCB-205		31.38	4.38	0.20	J		5.3						
PCB-208		29.72	26.7	0.50			5.3						
PCB-207		30.21	10.6	0.57			5.3						
PCB-206		32.48	54.9	0.86			5.3						
PCB-209		33.64	68.3	0.30			5.3						

Extraction Standards	**pg**	**Time**	**% Rec**	**Limits**	**Time**	**% Rec**	**Limits**
13C12-PCB-001	2000	8.82	52	5-145			
13C12-PCB-003	2000	10.34	45	5-145			
13C12-PCB-004	2000	10.52	49	5-145			
13C12-PCB-015	2000	14.21	54	5-145			
13C12-PCB-019	2000	12.53	41	5-145			
13C12-PCB-037	2000	18.16	54	5-145			
13C12-PCB-054	2000	14.41	46	5-145			
13C12-PCB-081	2000	21.75	63	5-145			
13C12-PCB-077	2000	22.06	60	5-145			
13C12-PCB-104	2000	17.47	53	5-145			
13C12-PCB-123	2000	23.06	68	5-145			
13C12-PCB-118	2000	23.23	68	5-145			
13C12-PCB-114	2000	23.52	69	5-145			
13C12-PCB-105	2000	23.89	68	5-145			
13C12-PCB-126	2000	25.46	65	5-145			
13C12-PCB-155	2000	20.47	26	5-145			
13C12-PCB-167	2000	26.38	55	5-145			
13C12-PCB-156/157	4000	27.02	55	5-145			
13C12-PCB-169	2000	28.68	54	5-145			
13C12-PCB-188	2000	23.48	50	5-145			
13C12-PCB-189	2000	29.97	57	5-145			
13C12-PCB-202	2000	26.27	49	5-145			
13C12-PCB-205	2000	31.38	53	5-145			
13C12-PCB-208	2000	29.70	49	5-145			
13C12-PCB-206	2000	32.46	54	5-145			
13C12-PCB-209	2000	33.60	49	5-145			
Cleanup Standards							
13C12-PCB-028	2000	15.92	58	5-145			
13C12-PCB-111	2000	21.99	56	5-145			
13C12-PCB-178	2000	25.05	59	5-145			

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-4	Sampling Date	8-May-17		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.68	g	--e-signature--
Sample Matrix		Percent Moisture	8.3%		28-Jun-2017
		Split Ratio	1		

Run Information	**Run 1**	**Run 2**
Filename	5-170622B11	5-170624A06
Run Date	23-Jun-17 01:03	24-Jun-17 05:52
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
Homologue Group Totals													
Total MonoCB			10.0	0.12	J		5.3						
Total DiCB			189	0.21	J		5.3						
Total TriCB			978	0.12	J		5.3						
Total TetraCB			3770	0.14	J		5.3						
Total PentaCB			5530	0.13	J		5.3						
Total HexaCB			6830	0.15	J		5.3						
Total HeptaCB			2240	0.17	J		5.3						
Total OctaCB			500	0.11	J		5.3						
Total NonaCB			92.2	0.50	J		5.3						
DecaCB			68.3	0.30	J		5.3						
Total PCB			20200		J								
Toxic Equivalency - (WHO 2005)													
Lower Bound PCB TEQ			0.332										
Mid Point PCB TEQ			0.333										
Upper Bound PCB TEQ			0.333										

EDL	Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.
TEF	Indicates the Toxic Equivalency Factor TEQ Indicates the Toxic Equivalency
LQL	Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.
M	Indicates that a peak has been manually integrated.
UJ	Indicates that this compound was not detected above the EDL.
J	indicates that the analyte was positively identifed. The associated numerical result is an estimate.
NJ	Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.
B	Indicates that this target was detected in the blank at greater than 10% of the sample concentration.
EMPC	Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-5	Sampling Date	8-May-17		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.87	g	--e-signature--
Sample Matrix		Percent Moisture	7.5%		28-Jun-2017
		Split Ratio	1		

Run Information	**Run 1**	**Run 2**
Filename	5-170622B12	5-170624A07
Run Date	23-Jun-17 01:43	24-Jun-17 06:32
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL
PCB-001		8.83	3.44	0.11	J		5.1						
PCB-002		10.25	3.05	0.11	J		5.1						
PCB-003		10.38	<2.8	0.13	J,NJ	2.8	5.1						
PCB-004		10.54	13.5	0.23			5.1						
PCB-010		10.66	0.847	0.14	J		5.1						
PCB-009		11.81	2.17	0.14	J,B		5.1						
PCB-007		11.92	1.64	0.14	J		5.1						
PCB-006		12.07	6.47	0.14			5.1						
PCB-005		12.28	<0.36	0.15	M,J,NJ	0.36	5.1						
PCB-008		12.35	38.7	0.14	M		5.1						
PCB-014		13.34	<0.19	0.14	J,NJ	0.19	5.1						
PCB-011		13.85	121	0.15	B		5.1						
PCB-012/013		14.05	2.73	0.16	J,B		5.1						
PCB-015		14.23	11.3	0.16	B		5.1						
PCB-019		12.55	6.50	0.16			5.1						
PCB-018/030		13.67	58.9	0.091			5.1						
PCB-017		13.91	45.6	0.12			5.1						
PCB-027		14.05	5.89	0.074			5.1						
PCB-024		14.13	<0.38	0.079	M,J,NJ	0.38	5.1						
PCB-016		14.21	19.6	0.14	M		5.1						
PCB-032		14.49	24.5	0.068			5.1						
PCB-034		15.20	1.30	0.16	J		5.1						
PCB-023		15.30	<0.16	0.16	UJ	0.11	5.1						
PCB-026/029		15.46	22.8	0.18			5.1						
PCB-025		15.59	10.8	0.15			5.1						
PCB-031		15.77	99.5	0.15			5.1						
PCB-020/028		15.96	144	0.16			5.1						
PCB-021/033		16.09	52.9	0.15			5.1						
PCB-022		16.32	31.4	0.16			5.1						
PCB-036		17.14	1.40	0.14	J		5.1						
PCB-039		17.37	<0.90	0.17	J,NJ	0.90	5.1						
PCB-038		17.70	<0.33	0.15	J,NJ	0.33	5.1						
PCB-035		17.95	2.57	0.16	J,B		5.1						
PCB-037		18.18	14.5	0.16	B		5.1						
PCB-054		14.42	<0.52	0.15	M,J,NJ	0.52	5.1						
PCB-050/053		15.63	37.4	0.14			5.1						
PCB-045/051		16.04	41.6	0.14			5.1						
PCB-046		16.20	8.44	0.17			5.1						
PCB-052		16.94	433	0.15			5.1						
PCB-073		NotFnd	<0.096	0.096	UJ		5.1						
PCB-043		17.09	5.19	0.15			5.1						
PCB-049/069		17.22	227	0.12			5.1						
PCB-048		17.39	27.3	0.14			5.1						
PCB-044/047/065		17.52	276	0.13			5.1						
PCB-059/062/075		17.69	<17	0.10	NJ	17	5.1						
PCB-042		17.82	<53	0.15	NJ	53	5.1						
PCB-040/041/071		18.08	103	0.14			5.1						
PCB-064		18.20	<80	0.099	NJ	80	5.1						
PCB-072		18.60	<6.4	0.34	NJ	6.4	5.1						
PCB-068		18.76	<7.3	0.29	NJ	7.3	5.1						
PCB-057		19.00	<1.4	0.34	J,NJ	1.4	5.1						
PCB-058		19.10	<12	0.35	NJ	12	5.1						
PCB-067		19.22	6.07	0.31			5.1						
PCB-063		19.36	10.6	0.33			5.1						
PCB-061/070/074/076		19.56	322	0.35			5.1						
PCB-066		19.74	205	0.34			5.1						
PCB-055		19.84	<1.8	0.36	J,NJ	1.8	5.1						
PCB-056		20.12	59.8	0.34			5.1						
PCB-060		20.23	35.3	0.34			5.1						
PCB-080		20.33	4.13	0.34	J		5.1						
PCB-079		21.23	4.49	0.31	J		5.1						
PCB-078		NotFnd	<0.34	0.34	UJ		5.1						
PCB-081	0.0003	21.70	<5.4	0.31	NJ	5.4	5.1						
PCB-077	0.0001	22.08	8.89	0.32			5.1						
PCB-104		17.49	<0.20	0.14	J,NJ	0.20	5.1						
PCB-096		17.72	2.14	0.14	J		5.1						
PCB-103		18.71	<13	0.29	NJ	13	5.1						
PCB-094		18.84	3.77	0.33	J		5.1						
PCB-095		19.10	365	0.35	M		5.1						
PCB-093/098/100/102		19.18	31.3	0.31	M		5.1						

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-5	Sampling Date	8-May-17	
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17	Approved:
Analysis Type	Sample	Sample Size	4.87 g	*E. Sabljic*
Sample Matrix		Percent Moisture	7.5%	--e-signature--
		Split Ratio	1	28-Jun-2017

Run Information	**Run 1**	**Run 2**
Filename	5-170622B12	5-170624A07
Run Date	23-Jun-17 01:43	24-Jun-17 06:32
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL
PCB-088/091		19.56	106	0.32			5.1						
PCB-084		19.71	84.7	0.38			5.1						
PCB-089		19.95	<2.7	0.34	J,NJ	2.7	5.1						
PCB-121		20.10	1.30	0.22	J		5.1						
PCB-092		20.31	118	0.32			5.1						
PCB-090/101/113		20.62	556	0.30			5.1						
PCB-083/099		20.93	498	0.31			5.1						
PCB-112		NotFnd	<0.26	0.26	UJ		5.1						
PCB-086/087/097/109/119/125		21.23	245	0.28	M		5.1						
PCB-085/110/115/116/117		21.70	571	0.26	M		5.1						
PCB-082		21.90	31.2	0.37			5.1						
PCB-111		22.01	2.87	0.23	J		5.1						
PCB-120		22.26	9.94	0.22			5.1						
PCB-108/124		22.88	12.9	0.19			5.1						
PCB-107		23.02	48.8	0.18	M		5.1						
PCB-123	0.00003	23.06	5.41	0.20	M		5.1						
PCB-106		NotFnd	<0.20	0.20	UJ		5.1						
PCB-118	0.00003	23.25	353	0.20			5.1						
PCB-122		23.46	<2.4	0.21	J,NJ	2.4	5.1						
PCB-114	0.00003	23.54	<6.9	0.20	NJ	6.9	5.1						
PCB-105	0.00003	23.90	113	0.20			5.1						
PCB-127		24.66	0.920	0.18	J		5.1						
PCB-126	0.1	25.50	<0.82	0.21	M,J,NJ	0.82	5.1						
PCB-155		20.49	2.90	0.15	J		5.1						
PCB-152		20.65	<0.27	0.16	M,J,NJ	0.27	5.1						
PCB-150		20.72	5.88	0.15	M		5.1						
PCB-136		20.95	64.9	0.17			5.1						
PCB-145		21.06	<0.22	0.17	J,NJ	0.22	5.1						
PCB-148		21.81	7.59	0.20			5.1						
PCB-135/151		22.16	264	0.21			5.1						
PCB-154		22.26	42.0	0.18			5.1						
PCB-144		22.45	18.7	0.21			5.1						
PCB-147/149		22.65	618	0.30			5.1						
PCB-134/143		22.79	21.8	0.33			5.1						
PCB-139/140		22.97	14.8	0.30			5.1						
PCB-131		23.10	3.80	0.32	J		5.1						
PCB-142		NotFnd	<0.35	0.35	UJ		5.1						
PCB-132		23.34	137	0.32			5.1						
PCB-133		23.54	31.8	0.32			5.1						
PCB-165		23.74	5.53	0.25			5.1						
PCB-146		23.87	246	0.29			5.1						
PCB-161		NotFnd	<0.24	0.24	UJ		5.1						
PCB-153/168		24.20	1030	0.25			5.1						
PCB-141		24.31	83.4	0.35			5.1						
PCB-130		24.54	55.2	0.37			5.1						
PCB-137/164		24.71	65.9	0.29			5.1						
PCB-129/138/163		24.87	892	0.31			5.1						
PCB-160		NotFnd	<0.22	0.22	UJ		5.1						
PCB-158		25.07	44.9	0.23			5.1						
PCB-128/166		25.56	117	0.28			5.1						
PCB-159		26.01						26.02	5.97	2.0	M,J		51
PCB-162		26.15						26.15	<2.8	2.0	M,J,NJ	2.8	51
PCB-167	0.00003	26.40	22.7	0.22			5.1						
PCB-156/157	0.00003	27.02	45.2	0.27			10						
PCB-169	0.03	28.68	<1.5	0.23	J,NJ	1.5	5.1						
PCB-188		23.51	3.12	0.14	J		5.1						
PCB-179		23.71	78.9	0.16			5.1						
PCB-184		23.95	1.42	0.14	J		5.1						
PCB-176		24.17	13.6	0.16			5.1						
PCB-186		NotFnd	<0.16	0.16	UJ		5.1						
PCB-178		25.07	71.3	0.21			5.1						
PCB-175		25.40	7.64	0.20			5.1						
PCB-187		25.55	352	0.17			5.1						
PCB-182		NotFnd	<0.21	0.21	UJ		5.1						
PCB-183								25.87	114	1.8			51
PCB-185								25.97	11.5	1.8	M,J		51
PCB-174								26.02	128	2.0	M		51
PCB-177		26.25	104	0.22			5.1						
PCB-181		26.45	<1.2	0.21	J,NJ	1.2	5.1						
PCB-171/173		26.56	45.5	0.23			5.1						
PCB-172		27.37	<29	0.22	NJ	29	5.1						

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Sample Analysis Report

Sample Name

ALS Sample ID	L1931034-5	Sampling Date	8-May-17		Approved:
Analysis Method	EPA 1668C	Extraction Date	19-Jun-17		*E. Sabljic*
Analysis Type	Sample	Sample Size	4.87	g	--e-signature--
Sample Matrix		Percent Moisture	7.5%		28-Jun-2017
		Split Ratio	1		

Run Information	**Run 1**	**Run 2**
Filename	5-170622B12	5-170624A07
Run Date	23-Jun-17 01:43	24-Jun-17 06:32
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
PCB-192		NotFnd	<0.18	0.18	UJ		5.1						
PCB-180/193		27.71	360	0.19			5.1						
PCB-191		27.89	4.56	0.17	J		5.1						
PCB-170		28.40	126	0.23			5.1						
PCB-190		28.67	27.1	0.16			5.1						
PCB-189	0.00003	30.00	5.69	0.20			5.1						
PCB-202		26.28	38.0	0.17			5.1						
PCB-201								26.76	17.4	1.1	J		51
PCB-204		27.11	<0.30	0.17	J,NJ	0.30	5.1						
PCB-197		27.22	5.00	0.17	J		5.1						
PCB-200		27.32	6.53	0.19			5.1						
PCB-198/199		28.72	115	0.25			5.1						
PCB-196		29.06	38.8	0.26			5.1						
PCB-203		29.16	64.9	0.25			5.1						
PCB-195								29.90	26.3	1.0	J		51
PCB-194		31.11	77.5	0.19			5.1						
PCB-205		31.40	<3.5	0.16	J,NJ	3.5	5.1						
PCB-208		29.72	25.3	0.36			5.1						
PCB-207		30.21	9.13	0.41			5.1						
PCB-206		32.49	46.2	0.61			5.1						
PCB-209		33.65	80.9	0.24			5.1						

Extraction Standards	**pg**	**Time**	**% Rec**	**Limits**	**Time**	**% Rec**	**Limits**
13C12-PCB-001	2000	8.83	63	5-145			
13C12-PCB-003	2000	10.36	52	5-145			
13C12-PCB-004	2000	10.54	59	5-145			
13C12-PCB-015	2000	14.21	64	5-145			
13C12-PCB-019	2000	12.55	50	5-145			
13C12-PCB-037	2000	18.16	64	5-145			
13C12-PCB-054	2000	14.41	58	5-145			
13C12-PCB-081	2000	21.75	76	5-145			
13C12-PCB-077	2000	22.06	74	5-145			
13C12-PCB-104	2000	17.47	60	5-145			
13C12-PCB-123	2000	23.06	84	5-145			
13C12-PCB-118	2000	23.23	83	5-145			
13C12-PCB-114	2000	23.54	83	5-145			
13C12-PCB-105	2000	23.89	82	5-145			
13C12-PCB-126	2000	25.48	81	5-145			
13C12-PCB-155	2000	20.47	53	5-145			
13C12-PCB-167	2000	26.38	66	5-145			
13C12-PCB-156/157	4000	27.02	67	5-145			
13C12-PCB-169	2000	28.68	69	5-145			
13C12-PCB-188	2000	23.49	63	5-145			
13C12-PCB-189	2000	29.98	71	5-145			
13C12-PCB-202	2000	26.27	61	5-145			
13C12-PCB-205	2000	31.38	66	5-145			
13C12-PCB-208	2000	29.70	63	5-145			
13C12-PCB-206	2000	32.48	69	5-145			
13C12-PCB-209	2000	33.64	42	5-145			
Cleanup Standards							
13C12-PCB-028	2000	15.94	73	5-145			
13C12-PCB-111	2000	21.99	69	5-145			
13C12-PCB-178	2000	25.07	73	5-145			

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Sample Analysis Report

Sample Name		Sampling Date	8-May-17		
ALS Sample ID	L1931034-5	Extraction Date	19-Jun-17		Approved:
Analysis Method	EPA 1668C	Sample Size	4.87	g	*E. Sabljic*
Analysis Type	Sample	Percent Moisture	7.5%		--e-signature--
Sample Matrix		Split Ratio	1		28-Jun-2017

Run Information	**Run 1**	**Run 2**
Filename	5-170622B12	5-170624A07
Run Date	23-Jun-17 01:43	24-Jun-17 06:32
Final Volume	25 ul	25 uL
Dilution Factor	1	10
Analysis Units	pg/g	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
Homologue Group Totals													
Total MonoCB			9.29	0.11	J		5.1						
Total DiCB			199	0.14	J		5.1						
Total TriCB			544	0.068	J		5.1						
Total TetraCB			2000	0.096	J		5.1						
Total PentaCB			3190	0.14	J		5.1						
Total HexaCB			3850	0.15	J		5.1						
Total HeptaCB			1480	0.14	J		5.1						
Total OctaCB			393	0.16	J		5.1						
Total NonaCB			80.6	0.36	J		5.1						
DecaCB			80.9	0.24	J		5.1						
Total PCB			11800		J								
Toxic Equivalency - (WHO 2005)													
Lower Bound PCB TEQ			0.0172										
Mid Point PCB TEQ			0.146										
Upper Bound PCB TEQ			0.146										

EDL	Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.
TEF	Indicates the Toxic Equivalency Factor TEQ Indicates the Toxic Equivalency
LQL	Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.
M	Indicates that a peak has been manually integrated.
UJ	Indicates that this compound was not detected above the EDL.
J	indicates that the analyte was positively identifed. The associated numerical result is an estimate.
NJ	Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.
B	Indicates that this target was detected in the blank at greater than 10% of the sample concentration.
EMPC	Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure

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SVOC DATA PACKAGE

SECTION 3: METHOD SUMMARY

PCB METHOD SUMMARY
Method 1668

Introduction:

This summary is to provide ALSE Burlington PCB method details in order to provide persons reviewing or validating this data package sufficient informatior to re-construct the sample calculation, data verification and review. It incorporates the analysis of PCBs via the following reference methods

US EPA Office of Water, Method 1668A
US EPA Office of Water, Method 1668C

Any deviations to what is listed herein would be listed in the project narrative

To avoid the confusion and conflicting nomenclature within the methods, we have defined the labeled standards in terms relating to the time of addition to the sample or extract. Therefore;

The Field or Sampling Standards are added prior to field sampling
The Extraction Standards are added prior to extraction
The Clean-up Standards are added prior to extract clean-up
The Injection Standards are added prior to extract injection

Calibration Standard Levels:

Six levels of standard are available for calibration as listed in Table 1. The low point (the CS0) is below method requirements and therefore is optional

Table 1. Concentration of CB congeners in calibration and calibration verification standards
Solution concentration (ng/mL)

CB congener	IUPAC [1]	CS-0.2 (Hi sens)2	CS-1	CS-2	CS-3 (VER)	CS-4	CS-5
Native Toxics/LOC							
2-MoCB	1	0.2	1	5	50	400	2000
4-MoCB	3	0.2	1	5	50	400	2000
2,2'-DiCB	4	0.2	1	5	50	400	2000
4,4'-DiCB	15	0.2	1	5	50	400	2000
2,2',6'-TrCB	19	0.2	1	5	50	400	2000
3,4,4'-TrCB	37	0.2	1	5	50	400	2000
2,2',6,6'-TeCB	54	0.2	1	5	50	400	2000
3,3',4,4'-TeCB	77	0.2	1	5	50	400	2000
3,4,4',5-TeCB	81	0.2	1	5	50	400	2000
2,2',4,6,6'-PeCB	104	0.2	1	5	50	400	2000
2,3,3',4,4'-PeCB	105	0.2	1	5	50	400	2000
2,3,4,4',5-PeCB	114	0.2	1	5	50	400	2000
2,3',4,4',5-PeCB	118	0.2	1	5	50	400	2000
2',3,4,4',5-PeCB	123	0.2	1	5	50	400	2000
3,3',4,4',5-PeCB	126	0.2	1	5	50	400	2000
2,2',4,4',6,6'-HxCB	155	0.2	1	5	50	400	2000
2,3,3',4,4',5-HxCB	156	0.2	1	5	50	400	2000
2,3,3',4,4',5'-HxCB	157	0.2	1	5	50	400	2000
2,3',4,4',5,5'-HxCB	167	0.2	1	5	50	400	2000
3,3',4,4',5,5'-HxCB	169	0.2	1	5	50	400	2000
2,2',3,4',5,6,6'-HpCB	188	0.2	1	5	50	400	2000
2,3,3',4,4',5,5'-HpCB	189	0.2	1	5	50	400	2000
2,2',3,3',5,5',6,6'-OcCB	202	0.2	1	5	50	400	2000
2,3,3',4,4',5,5',6-OcCB	205	0.2	1	5	50	400	2000
2,2',3,3',4,4',5,5',6-NoCB	206	0.2	1	5	50	400	2000
2,2',3,3',4',5,5',6,6'-NoCB	208	0.2	1	5	50	400	2000
DeCB 209	209	0.2	1	5	50	400	2000
Labelled Toxics/LOC/window-defining							
13C12-2-MoCB	1L	100	100	100	100	100	100
13C12-4-MoCB	3L	100	100	100	100	100	100
13C12-2,2'-DiCB	4L	100	100	100	100	100	100
13C12-4,4'-DiCB	15L	100	100	100	100	100	100
13C12-2,2',6'-TrCB	19L	100	100	100	100	100	100
13C12-3,4,4'-TrCB	37L	100	100	100	100	100	100
13C12-2,2',6,6'-TeCB	54L	100	100	100	100	100	100
13C12-3,3',4,4'-TeCB	77L	100	100	100	100	100	100
13C12-3,4,4',5-TeCB	81L	100	100	100	100	100	100
13C12-2,2',4,6,6'-PeCB	104L	100	100	100	100	100	100
13C12-2,3,3',4,4'-PeCB	105L	100	100	100	100	100	100
13C12-2,3,4,4',5-PeCB	114L	100	100	100	100	100	100
13C12-2,3',4,4',5-PeCB	118L	100	100	100	100	100	100
13C12-2',3,4,4',5-PeCB	123L	100	100	100	100	100	100
13C12-3,3',4,4',5-PeCB	126L	100	100	100	100	100	100
13C12-2,2',4,4',6,6'-HxCB	155L	100	100	100	100	100	100
13C12-2,3,3',4,4',5-HxCB	156L	100	100	100	100	100	100
13C12-2,3,3',4,4',5'-HxCB	157L	100	100	100	100	100	100
13C12-2,3',4,4',5,5'-HxCB	167L	100	100	100	100	100	100
13C12-3,3',4,4',5,5'-HxCB	169L	100	100	100	100	100	100
13C12-2,2',3,4',5,6,6'-HpCB	188L	100	100	100	100	100	100
13C12-2,3,3',4,4',5,5'-HpCB	189L	100	100	100	100	100	100
13C12-2,2',3,3',5,5',6,6'-OcCB	202L	100	100	100	100	100	100
13C12-2,3,3',4,4',5,5',6-OcCB	205L	100	100	100	100	100	100
13C12-2,2',3,3',4,4',5,5',6-NoCB	206L	100	100	100	100	100	100
13C12-2,2',3,3',4',5,5',6,6'-NoCB	208L	100	100	100	100	100	100
13C12-DeCB 209L	209L	100	100	100	100	100	100
Labelled clean-up							
13C12-2,4,4'-TrCB	28L	100	100	100	100	100	100
13C12-2,3,3',5,5'-PeCB	111L	100	100	100	100	100	100
13C12-2,2',3,3',5,5',6-HpCB	178L	100	100	100	100	100	100
Labelled injection internal							
13C12-2,5-DiCB	9L	100	100	100	100	100	100
13C12-2,2',5,5'-TeCB	52L	100	100	100	100	100	100
13C12-2,2',4',5,5'-PeCB	101L	100	100	100	100	100	100
13C12-2,2',3',4,4',5'-HxCB	138L	100	100	100	100	100	100
13C12-2,2',3,3',4,4',5,5'-OcCB	194L	100	100	100	100	100	100

Method Control Limits for 1668A

The initial and continuing calibration control limits for both methods are presented in Table 2 below. For the initial calibration CS1 and for each calibration verification CS3, the signal to noise ratio for each quantification ion for labelled and non-labelled analytes must be greater than or equal to 10:1

Table 2A. QC acceptance crtiteria for chlorinated biphenyls in VER, IPR, OPR, and samples [1]

Congener	IUPAC Number [2]	Test conc (ng/mL)	VER (%)	IPR		OPR (%)	Labelled compound recovery in samples (%)
				RSD (%)	X (%)		
2-MoCB	1	50	70-130	40	60-140	50-150	
4-MoCB	3	50	70-130	40	60-140	50-150	
2,2'-DiCB	4	50	70-130	40	60-140	50-150	
4,4'-DiCB	15	50	70-130	40	60-140	50-150	
2,2'6-TrCB	19	50	70-130	40	60-140	50-150	
3,4,4'-TrCB	37	50	70-130	40	60-140	50-150	
2,2'6,6'TeCB	54	50	70-130	40	60-140	50-150	
3,3',4,4'-TeCB	77	50	70-130	40	60-140	50-150	
3,4,4',5-TeCB	81	50	70-130	40	60-140	50-150	
2,2',4,6,6'-PeCB	104	50	70-130	40	60-140	50-150	
2,3,3',4,4'-PeCB	105	50	70-130	40	60-140	50-150	
2,3,4,4',5-PeCB	114	50	70-130	40	60-140	50-150	
2,3',4,4',5-PeCB	118	50	70-130	40	60-140	50-150	
2',3,4,4',5-PeCB	123	50	70-130	40	60-140	50-150	
3,3',4,4',5-PeCB	126	50	70-130	40	60-140	50-150	
2,2',4,4',6,6'-HxCB	155	50	70-130	40	60-140	50-150	
2,3,3',4,4',5-HxCB [3]	156	50	70-130	40	60-140	50-150	
2,3,3',4,4',5'-HxCB [3]	157	50	70-130	40	60-140	50-150	
2,3',4,4',5,5'-HxCB	167	50	70-130	40	60-140	50-150	
3,3',4,4',5,5'-HxCB	169	50	70-130	40	60-140	50-150	
2,2',3,4',5,6,6'-HpCB	188	50	70-130	40	60-140	50-150	
2,3,3',4,4',5,5'-HpCB	189	50	70-130	40	60-140	50-150	
2,2',3,3',5,5',6,6'-OcCB	202	50	70-130	40	60-140	50-150	
2,3,3',4,4',5,5',6-OcCB	205	50	70-130	40	60-140	50-150	
2,2',3,3',4,4',5,5',6-NoCB	206	50	70-130	40	60-140	50-150	
2,2',3,3,'4,5,5',6,6'-NoCB	208	50	70-130	40	60-140	50-150	
DeCB	209	50	70-130	40	60-140	50-150	
13C12-2-MoCB	1L	100	50-150	50	35-135	30-140	25-150
13C12-4-MoCB	3L	100	50-150	50	35-135	30-140	25-150
13C12-2,2'-DiCB	4L	100	50-150	50	35-135	30-140	25-150
13C12-4,4'-DiCB	15L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',6-TrCB	19L	100	50-150	50	35-135	30-140	25-150
13C12-3,4,4'-TrCB	37L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',6,6'-TeCB	54L	100	50-150	50	35-135	30-140	25-150
13C12-3,3',4,4'-TCB	77L	100	50-150	50	35-135	30-140	25-150
13C12-3,4,4',5-TeCB	81L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',4,6,6'-PeCB	104L	100	50-150	50	35-135	30-140	25-150
13C12-2,3,3',4,4'-PeCB	105L	100	50-150	50	35-135	30-140	25-150
13C12-2,3,4,4',5-PeCB	114L	100	50-150	50	35-135	30-140	25-150
13C12-2,3',4,4',5-PeCB	118L	100	50-150	50	35-135	30-140	25-150
13C12-2',3,4,4',5-PeCB	123L	100	50-150	50	35-135	30-140	25-150
13C12-3,3',4,4',5-PeCB	126L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',4,4',6,6'-HxCB	155L	100	50-150	50	35-135	30-140	25-150
13C12-2,3,3',4,4',5 –HxCB [3]	156L	100	50-150	50	35-135	30-140	25-150
13C12-2,3,3',4,4',5'-HxCB [3]	157L	100	50-150	50	35-135	30-140	25-150
13C12-2,3',4,4',5,5'-HxCB	167L	100	50-150	50	35-135	30-140	25-150
13C12-3,3',4,4',5,5'-HxCB	169L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',3,4',5,6,6'-HpCB	188L	100	50-150	50	35-135	30-140	25-150
13C12-2',3,3',4,4',5,5'-HpCB	189L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',3,3',5,5',6,6'-OcCB	202L	100	50-150	50	35-135	30-140	25-150
13C12-2,3,3',4,4',5,5',6-OcCB	205L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',3,3',4,4',5,5',6-NoCB	206L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',3,3',4,5,5',6,6'-NoCB	208L	100	50-150	50	35-135	30-140	25-150
13C12-2,2',3,3',4,4',5,5',6,6'-DeCB	209L	100	50-150	50	35-135	30-140	25-150
Cleanup standard							
13C12-2,4,4'-TrCB	28L	100	60-130	45	45-120	40-125	30-135
13C12-2,3,3',5,5'-PeCB	111L	100	60-130	45	45-120	40-125	30-135
13C12-2,2',3,3',5,5',6-HpCB	178L	100	60-130	45	45-120	40-125	30-135

1. QC acceptance criteria for IPR, OPR, and samples based on a 20 ul extract final volume

2. Suffix "L" indicates labelled compound.

3. PCBs 156 and 157 are tested as the sum of two concentrations

Method Control Limits for 1668C

The initial and continuing calibration control limits for both methods are presented in Table 2 below. For the initial calibration CS1 and for each calibration verification CS3, the signal to noise ratio for each quantification ion for labelled and non-labelled analytes must be greater than or equal to 10:1

Table 2A. QC acceptance crtiteria for chlorinated biphenyls in VER, IPR, OPR, and samples [1]

Congener	IUPAC Number [2]	Test conc (ng/mL)	VER (%)	IPR		OPR (%)	Labelled compound recovery in samples (%)
				RSD (%)	X (%)		
2-MoCB	1	50	75 - 125	25	70 - 130	60 - 135	
4-MoCB	3	50	75 - 125	25	70 - 130	60 - 135	
2,2'-DiCB	4	50	75 - 125	25	70 - 130	60 - 135	
4,4'-DiCB	15	50	75 - 125	25	70 - 130	60 - 135	
2,2'6-TrCB	19	50	75 - 125	25	70 - 130	60 - 135	
3,4,4'-TrCB	37	50	75 - 125	25	70 - 130	60 - 135	
2,2'6,6'TeCB	54	50	75 - 125	25	70 - 130	60 - 135	
3,3',4,4'-TeCB	77	50	75 - 125	25	70 - 130	60 - 135	
3,4,4',5-TeCB	81	50	75 - 125	25	70 - 130	60 - 135	
2,2',4,6,6'-PeCB	104	50	75 - 125	25	70 - 130	60 - 135	
2,3,3',4,4'-PeCB	105	50	75 - 125	25	70 - 130	60 - 135	
2,3,4,4',5-PeCB	114	50	75 - 125	25	70 - 130	60 - 135	
2,3',4,4',5-PeCB	118	50	75 - 125	25	70 - 130	60 - 135	
2',3,4,4',5-PeCB	123	50	75 - 125	25	70 - 130	60 - 135	
3,3',4,4',5-PeCB	126	50	75 - 125	25	70 - 130	60 - 135	
2,2',4,4',6,6'-HxCB	155	50	75 - 125	25	70 - 130	60 - 135	
2,3,3',4,4',5-HxCB [3]	156	50	75 - 125	25	70 - 130	60 - 135	
2,3,3',4,4',5'-HxCB [3]	157	50	75 - 125	25	70 - 130	60 - 135	
2,3',4,4',5,5'-HxCB	167	50	75 - 125	25	70 - 130	60 - 135	
3,3',4,4',5,5'-HxCB	169	50	75 - 125	25	70 - 130	60 - 135	
2,2',3,4',5,6,6'-HpCB	188	50	75 - 125	25	70 - 130	60 - 135	
2,3,3',4,4',5,5'-HpCB	189	50	75 - 125	25	70 - 130	60 - 135	
2,2',3,3',5,5',6,6'-OcCB	202	50	75 - 125	25	70 - 130	60 - 135	
2,3,3',4,4',5,5',6-OcCB	205	50	75 - 125	25	70 - 130	60 - 135	
2,2',3,3',4,4',5,5',6-NoCB	206	50	75 - 125	25	70 - 130	60 - 135	
2,2',3,3,'4,5,5',6,6'-NoCB	208	50	75 - 125	25	70 - 130	60 - 135	
DeCB	209	50	75 - 125	25	70 - 130	60 - 135	
13C12-2-MoCB	1L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-4-MoCB	3L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-2,2'-DiCB	4L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-4,4'-DiCB	15L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-2,2',6-TrCB	19L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-3,4,4'-TrCB	37L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-2,2',6,6'-TeCB	54L	100	50 - 145	70	20 - 135	5 - 145	5 - 145
13C12-3,3',4,4'-TeCB	77L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-3,4,4',5-TeCB	81L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',4,6,6'-PeCB	104L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3,3',4,4'-PeCB	105L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3,4,4',5-PeCB	114L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3',4,4',5-PeCB	118L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2',3,4,4',5-PeCB	123L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-3,3',4,4',5-PeCB	126L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',4,4',6,6'-HxCB	155L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3,3',4,4',5 -HxCB [3]	156L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3,3',4,4',5'-HxCB [3]	157L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3',4,4',5,5'-HxCB	167L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-3,3',4,4',5,5'-HxCB	169L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',3,4',5,6,6'-HpCB	188L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2',3,3',4,4',5,5'-HpCB	189L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',3,3',5,5',6,6'-OcCB	202L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,3,3',4,4',5,5',6-OcCB	205L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',3,3',4,4',5,5',6-NoCB	206L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',3,3',4,5,5',6,6'-NoCB	208L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
13C12-2,2',3,3',4,4',5,5',6,6'-DeCB	209L	100	50 - 145	50	45 - 135	10 - 145	10 - 145
Cleanup standards							
13C12-2,4,4'-TrCB	28L	100	65 - 135	70	20 - 135	5 - 145	5 - 145
13C12-2,3,3',5,5'-PeCB	111L	100	75 - 125	50	45 - 135	10 - 145	10 - 145
13C12-2,2',3,3',5,5',6-HpCB	178L	100	75 - 125	50	45 - 135	10 - 145	10 - 145

1. QC acceptance criteria for IPR, OPR, and samples based on a 20-µL extract final volume
2. Suffix "L" indicates labeled compound.
3. CBs 156/157 and 156L/157L are tested as the sum of the two congeners

Reporting Limits:

Unless indicated in the otherwise, the PCB results are reported down to 2.5:1 signal to noise for each isomer grouping for each extract injection. This is consistent to SW846 8290 defined protocols (i.e. EDL or Estimated Detection Limit) and is commonly applied throughout the industry to any or all the HRMS performance based methods applicable to this method summary.

Method Blank:

The Method Blank must be below the EMLs published in the required method, 1668A or 1668C.

MS/MSD:

The % relative difference between the MS and MSD spike recoveries should be less than or equal to 20%.

Instrument/Run Performance Criteria:

1. Elution windows must be defined by a 'Window Performance Mix' at the beginning of each 12-hour run sequence
2. GC performance criteria of 40% maximum valley between PCB-34/PCB-23, and PCB-187/PCB-182 (Octyl Column).
3. At the beginning of and just following the end of each 12 hour run sequence, the instrument must be checked to demonstrate a resolution of 10,000 within each quantification window (8,000 minimum across the window).
4. The relative retention times (RRT) of the compounds in the daily 209 congener mix must fall into the ranges presented in Table 4.
5. The RT in the daily CS3 verification standards must be within 15 seconds of the CS3 in the initial calibration run.
6. The maximum time between scans within a descriptor is 1 second.
7. Lock mass deviations to the average response must be less than or equal 20%.

Laboratory Duplicates:

The % relative difference between duplicates should be less than or equal to 25% but only where the response is greater than the low calibration standard.

Analyte Identification Criteria:

1. Ion ratio must be within 15% of theoretical or within 10% of the most recent CS3.
2. The retention time (RT) of the peak maxima for each pair of quantification ions must be no more than 2 seconds (i.e. 2 scans) difference.
3. The retention time (RT) of the peak maxima of all native analytes for which a labeled analogue is used must be within -1 to +3 seconds of the RT of corresponding $^{13}C_{12}$-labelled isomer of that injection run.
4. For those native analytes without a corresponding labelled isomer, the relative retention time (RRT) must be within 0.005 of the relative retention time observed in the daily 209 congener run.

DEVIATIONS AND CLARIFICATIONS FROM THE PRIMARY REFERENCES

The reference methods applicable to this document are:
US EPA Office of Water, Method 1668A
US EPA Office of Water, Method 1668C

These methods are referred-to herein as Method 1668

The following changes and clarifications apply:

1) As stated in method 1668, alternate columns and column systems are allowable changes to the method. In the context of the method, it is clear that Table 2 of this method (including retention times, relative retention times, and quantitation references) is specific to the Octyl GC column if used exactly as suggested in the method.

As a performance based method, changes in the internal standard references could be considered an improvement even when using the SPB-Octyl column. However when using an alternate column system (which may or may not include use of the Octyl column), optimization of the quantitation references can be an important part of optimizing the method. Consider that the MS acquisition method must be divided into mass descriptors or 'functions', each one defining the masses that are monitored during that time range. When monitoring for all 209 PCB congeners, there are large chromatographic regions where elution of target compounds is nearly continuous with little separation between peaks. In addition, there is a slight acquisition "gap" that occurs at each function change (for Water's instruments 1-2 seconds, for Thermo instruments 6-8 seconds), and also the likelihood of slight retention time shifts from one run to another. Consequently, choosing the exact location of each function boundary can be challenging. For a 1668 method, there are typically between 5 and 8 functions dependent upon the column, the GC conditions, the instrument and the choice of the function boundaries by the laboratory. Each function can have 1 to as many as 4 chlorination levels. When optimizing the quantification model in the case where RT and elution patterns have changed – even slightly - the best choice of internal standard references can and should change dependent upon target retention times and placement of function boundaries. For example, the best quantification is achieved using an internal standard reference that elutes at close to the same retention time. Another consideration is that it is best practice where possible (i.e. generally allows for more accurate target determinations) to have the internal standard reference within the same function rather than quantify a target relative to an internal standard from an outside function.

The quantification references used in this analysis are detailed in Table 3.

2) The absolute retention time criterion for decachlorobiphenyl of 55 minutes is not generally followed and is an unnecessary restriction since method 1668 was developed without the use of electronic pressure control on the GC injection system, and there are GC performance criteria that can be met without this restriction. As a result, the RRT criteria of 1668 may not be applicable.

3) Although not clearly stated in method 1668, we maintain that each and every individual clean-up procedure is, by definition, performance-based and optional. There is not an expectation within the industry to follow exactly the descriptions of clean-ups in reference methods. Adaptations which meet or exceed the required performance criteria are therefore acceptable within the scope of each reference method. The reference method descriptions are intended as guidelines or templates available to help the laboratory to define effective in-house clean-up methods. The objective within the laboratory is to provide quality clean extracts to the instrument for analysis. Each individual clean-up is part of the laboratory's available tools in order to achieve this objective.

4) There are differences within the individual reference methods as to the precise spiking protocols for adding extraction standards and native spikes (for LCS, MS and MSD). To ensure consistency within the laboratory between HRMS methods, the PCB preparative method requires solid samples (including stack and ambient sorbants/filters) to be spiked in the soxhlet extractor from a nonane solution and waters are spiked before filtering from an acetone solution. .

5) Sub-sampling of solids and pre-extraction processing is done in a manner that minimizes potential for cross-contamination. These processes are designed around SW846 protocols rather than 1668 protocols. Solids are sub-sampled directly from the bottle as submitted to the laboratory wherever practical. If the sample is submitted such that homogenization in the bottle is impractical (eg. the bottle is too full or lumps cannot be broken down), then transferring the sample to a tray or another bottle maybe in order.

6) The concentration of labelled and native spiking solutions are not consistent with those listed in all of the reference methods. These concentrations are prepared at levels convenient and expedient for accurate laboratory processing.

7) Extraction and injection standard concentrations differ from 1668, in order to aid precise measurement and standardise volumes with other reference methods such as PCDD/F by 1613B.

8) Method 1668C recognizes the option to use the 209 congener mix as the daily calibration verification solution rather than the CS3. This document acknowledges and allows either calibration option for both 1668A and 1668C analytical approaches.

9) For method 1668C analysis, the OPR labelled recovery limits are the same as for the sample recovery limits in method 1668C. This represents a broader acceptance range for the OPR than is currently listed in method 1668C. However, the control of the native (i.e. non-labelled) recovery limits is the key item to demonstrate/monitor in the OPR. Furthermore, in the OPR performance, it is important to demonstrate these native controls are maintained within the same range of labelled recoveries as is observed in the sample data.

Table 3: Quantitation References for Native and Labeled CBs

Cl No.[1]	Congener No.[2,3]	RT Ref[4]	Quantitation Reference[5]
Native Compounds			
1	1	1L	1L
1	2	3L	1L/3L
1	3	3L	3L
2	4	4L	4L
2	10	4L	4L/15L
2	9	4L	4L/15L
2	7	4L	4L/15L
2	6	4L	4L/15L
2	5	4L	4L/15L
2	8	4L	4L/15L
2	14	15L	4L/15L
2	11	15L	4L/15L
2	13/12	15L	4L/15L
2	15	15L	15L
3	19	19L	19L
3	30/18	19L	19L/37L
3	17	19L	19L/37L
3	27	19L	19L/37L
3	24	19L	19L/37L
3	16	19L	19L/37L
3	32	19L	19L/37L
3	34	19L	19L/37L
3	23	19L	19L/37L
3	26/29	19L	19L/37L
3	25	37L	19L/37L
3	31	37L	19L/37L
3	28/20	37L	19L/37L
3	21/33	37L	19L/37L
3	22	37L	19L/37L
3	36	37L	19L/37L
3	39	37L	19L/37L
3	38	37L	19L/37L
3	35	37L	19L/37L
3	37	37L	37L
4	54	54L	54L
4	50/53	54L	54L/81L/77L
4	45/51	54L	54L/81L/77L
4	46	54L	54L/81L/77L
4	52	54L	54L/81L/77L
4	73	54L	54L/81L/77L
4	43	54L	54L/81L/77L
4	69/49	54L	54L/81L/77L
4	48	54L	54L/81L/77L
4	44/47/65	54L	54L/81L/77L
4	59/62/75	54L	54L/81L/77L
4	42	54L	54L/81L/77L
4	41/40/71	54L	54L/81L/77L
4	64	54L	54L/81L/77L
4	72	81L	54L/81L/77L
4	68	81L	54L/81L/77L

Cl No.[1]	Congener No.[2,3]	RT Ref[4]	Quantitation Reference[5]
4	57	81L	54L/81L/77L
4	58	81L	54L/81L/77L
4	67	81L	54L/81L/77L
4	63	81L	54L/81L/77L
4	61/70/74/76	81L	54L/81L/77L
4	66	81L	54L/81L/77L
4	55	81L	54L/81L/77L
4	56	81L	54L/81L/77L
4	60	81L	54L/81L/77L
4	80	81L	54L/81L/77L
4	79	81L	54L/81L/77L
4	78	81L	54L/81L/77L
4	81	81L	81L
4	77	77L	77L
5	104	104L	104L
5	96	104L	104L/123L/114L/118L
5	103	104L	104L/123L/114L/118L
5	94	104L	104L/123L/114L/118L
5	95	104L	104L/123L/114L/118L
5	95/100/93/102/98	104L	104L/123L/114L/118L
5	88/91	104L	104L/123L/114L/118L
5	84	104L	104L/123L/114L/118L
5	89	104L	104L/123L/114L/118L
5	121	104L	104L/123L/114L/118L
5	92	123L	104L/123L/114L/118L
5	113/90/101	104L	104L/123L/114L/118L
5	83/99	104L	104L/123L/114L/118L
5	112	104L	104L/123L/114L/118L
5	108/119/86/97/125/87	104L	104L/123L/114L/118L
5	117/116/85/110/115	104L	104L/123L/114L/118L
5	82	104L	104L/123L/114L/118L
5	111	104L	104L/123L/114L/118L
5	120	104L	104L/123L/114L/118L
5	107/124	104L	104L/123L/114L/118L
5	109	104L	104L/123L/114L/118L
5	123	123L	123L
5	106	123L	104L/123L/114L/118L
5	118	118L	118L
5	122	118L	104L/123L/114L/118L
5	114	114L	114L
5	105	105L	105L
5	127	105L	104L/123L/114L/118L
5	126	126L	126L
6	155	155L	155L
6	152	155L	155L/156L/157L/167L
6	150	155L	155L/156L/157L/167L
6	136	155L	155L/156L/157L/167L
6	145	155L	155L/156L/157L/167L
6	148	155L	155L/156L/157L/167L
6	151/135	135L	155L/156L/157L/167L
6	154	155L	155L/156L/157L/167L
6	144	155L	155L/156L/157L/167L
6	147/149	155L	155L/156L/157L/167L
6	134/143	155L	155L/156L/157L/167L

Cl No. [1]	Congener No. [2,3]	RT Ref [4]	Quantitation Reference [5]
6	139/140	155L	155L/156L/157L/167L
6	131	155L	155L/156L/157L/167L
6	142	155L	155L/156L/157L/167L
6	132	155L	155L/156L/157L/167L
6	133	155L	155L/156L/157L/167L
6	165	167L	155L/156L/157L/167L
6	146	167L	155L/156L/157L/167L
6	161	167L	155L/156L/157L/167L
6	153/168	167L	155L/156L/157L/167L
6	141	167L	155L/156L/157L/167L
6	130	167L	155L/156L/157L/167L
6	137/164	167L	155L/156L/157L/167L
6	138/163/129	167L	155L/156L/157L/167L
6	160	167L	155L/156L/157L/167L
6	158	167L	155L/156L/157L/167L
6	128/166	167L	155L/156L/157L/167L
6	159	167L	155L/156L/157L/167L
6	162	167L	155L/156L/157L/167L
6	167	167L	155L/156L/157L/167L
6	156/157	156L/157L	156L/157L
6	169	169L	169L
7	188	188L	188L
7	179	188L	188L/189L
7	184	188L	188L/189L
7	176	188L	188L/189L
7	186	188L	188L/189L
7	178	188L	188L/189L
7	175	188L	188L/189L
7	187	188L	188L/189L
7	182	188L	188L/189L
7	183	188L	188L/189L
7	185	188L	188L/189L
7	174	188L	188L/189L
7	177	188L	188L/189L
7	181	188L	188L/189L
7	171/173	188L	188L/189L
7	172	189L	188L/189L
7	192	189L	188L/189L
7	180/193	189L	188L/189L
7	191	189L	188L/189L
7	170	189L	188L/189L
7	190	189L	188L/189L
7	189	189L	189L
8	202	202L	202L
8	201	202L	202L/205L
8	204	202L	202L/205L
8	197	202L	202L/205L
8	200	202L	202L/205L
8	198/199	202L	202L/205L
8	196	205L	202L/205L
8	203	205L	202L/205L
8	195	205L	202L/205L
8	194	205L	202L/205L
8	205	205L	205L
9	208	208L	208L
9	207	208L	208L/206L
9	206	206L	206L
10	209	209L	209L

Cl No.[1]	Congener No.[2,3]	RT Ref[4]	Quantitation Reference[5]
Labelled Extraction Standards			
1	1L	9L	9L
1	3L	9L	9L
2	4L	9L	9L
2	15L	9L	9L
3	19L	9L	9L
3	37L	52L	52L
4	54L	52L	52L
4	81L	101L	101L
4	77L	101L	101L
5	104L	101L	101L
5	123L	101L	101L
5	118L	101L	101L
5	114L	101L	101L
5	105L	101L	101L
5	126L	101L	101L
6	155L	101L	101L
6	167L	138L	138L
6	156L/157L	157L	138L
6	169L	138L	138L
7	188L	138L	138L
7	189L	138L	138L
8	202L	138L	138L
8	205L	194L	194L
9	208L	194L	194L
9	206L	194L	194L
10	209L	194L	194L
Labelled clean-up standards			
3	28L	52L	52L
5	111L	101L	101L
7	178L	138L	138L
Labelled injection internal standards			
2	9L	138L	138L
4	52L	138L	138L
5	101L	138L	138L
6	138L	138L	
8	194L	138L	138L

1. Number of chlorines on congener.

2. Suffix "L" indicates labelled compound.

3. Multiple congeners in a box indicates a group of congeners that co-elute or may not be adequately resolved on a 30-m SPBOctyl column. Congeners included in the group are listed as the last entry in the box.

4. Retention time reference that is used to locate target congener.

5. Labelled congeners that form the quantitation reference. Areas from the exact m/z's of the congeners listed in the quantitation

Table 5: HRMS Instrumental Descriptor Parameters

Function and chlorine level	m/z	m/z type	m/z formula	Substance
	180.9888	QC	C4F7	PFK
Fn-1; Cl-1	188.0393	M	12C12 H9 35Cl	Cl-1 CB
	190.0363	M+2	12C12 H9 37Cl	Cl-1 CB
	200.0795	M	13C12 H9 35Cl	13C12 Cl-1 CB
	202.0766	M+2	13C12 H9 37Cl	13C12 Cl-1 CB
	204.9983	QC	C6F7	PFK
	218.9856	lock	C4 F9	PFK
	230.9850	QC	C5F9	PFK
	204.9883	QC	C6F7	PFK
	218.9856	QC	C4F9	PFK
Fn-2; Cl-2,3	222.0003	M	12C12 H8 35Cl2	Cl-2 PCB
	223.9974	M+2	12C12 H8 35Cl 37Cl	Cl-2 PCB
	225.9944	M+4	12C12 H8 37Cl2	Cl-2 PCB
	234.0406	M	13C12 H8 35Cl2	13C12 Cl-2 PCB
	236.0376	M+2	13C12 H8 35Cl 37 Cl	13C12 Cl-2 PCB
	242.9856	lock	C6 F9	PFK
	255.9613	M	12C12 H7 35Cl3	Cl-3 PCB
	257.9584	M+2	12C12 H7 35Cl2 37Cl	Cl-3 PCB
	268.0016	M	13C12 H7 35Cl3	13C12 Cl-3 PCB
	269.9986	M+2	13C12 H7 35Cl2 37Cl 13C12	13C12 Cl-3 PCB
Fn-3	255.9613	M	12C12 H7 35Cl3	Cl-3 PCB
Cl-3,4,5	257.9584	M+2	12C12 H7 35Cl2 37Cl	Cl-3 PCB
	268.0016	M	13C12 H7 35Cl3	13C12 Cl-3 PCB
	269.9986	M+2	13C12 H7 35Cl2 37Cl 13C12	13C12 Cl-3 PCB
	280.9825	lock	C6 F11	PFK
	289.9224	M	12C12 H6 35Cl4	Cl-4 PCB
	291.9194	M+2	12C12 H6 35Cl3 37Cl	Cl-4 PCB
	301.9626	M	13C12 H6 35Cl4	13C12 Cl-4 PCB
	303.9597	M+2	13C12 H6 35Cl3 37Cl	13C12 Cl-4 PCB
	323.8834	M	12C12 H5 35Cl5	Cl-5 PCB
	325.8804	M+2 1	2C12 H5 35Cl4 37Cl	Cl-5 PCB
	327.8775	M+4	12C12 H5 35Cl3 37Cl2	Cl-5 PCB
	337.9207	M+2	13C12 H5 35Cl4 37Cl	13C12 Cl-5 PCB
	339.9178	M+4	13C12 H5 35Cl3 37Cl2	13C12 Cl-5 PCB
	280.9824		C6 F11	PFK
Fn-4	289.9224	M	12C12 H6 35Cl4	Cl-4 PCB
Cl-4,5,6	291.9194	M+2	12C12 H6 35Cl3 37Cl	Cl-4 PCB
	293.9165	M+4	12C12 H6 35Cl2 37Cl2	Cl-4 PCB
	301.9626	M+2	13C12 H6 35Cl3 37Cl	13C12 Cl-4 PCB
	303.9597	M+4	13C12 H6 35Cl2	13C12 Cl-4 PCB
	323.8834	M	12C12 H5 35Cl5	Cl-5 PCB
	325.8804	M+2	12C12 H5 35Cl4 37Cl	Cl-5 PCB
	327.8775	M+4	12C12 H5 35Cl3 37Cl2	Cl-5 PCB
	330.9792	lock	C7 F15	PFK
	337.9207	M+2	13C12 H5 35Cl4 37Cl 13C12	Cl-5 PCB
	339.9178	M+4	13C12 H5 35Cl3 37Cl2	13C12 Cl-5 PCB
	359.8415	M+2	13C12 H4 35Cl5 37Cl	Cl-6 PCB
	361.8385	M+4	13C12 H4 35Cl4 37Cl2	Cl-6 PCB
	363.8356	M+6	13C12 H4 35Cl3 37Cl2	Cl-6 PCB
	371.8817	M+2	13C12 H4 35Cl5 37Cl	13C12 Cl-6 PCB
	373.8788	M+4	13C12 H4 35Cl4 37Cl2	13C12 Cl-6 PCB

Function and chlorine level	m/z	m/z type	m/z formula	Substance
Fn-5	323.8834	M	12C12 H5 35Cl5	Cl-5 PCB
Cl-5,6,7	325.8804	M+2	12C12 H5 35Cl4 37Cl	Cl-5 PCB
	327.8775	M+4	12C12 H5 35Cl3 37Cl2	Cl-5 PCB
	337.9207	M+2	13C12 H5 35Cl4 37Cl	13C12 Cl-5 PCB
	339.9178	M+4	13C12 H5 35Cl3 37Cl2	13C12 Cl-5 PCB
	354.9792	lock	C9 F13	PFK
	359.8415	M+2	12C12 H4 35Cl5 37Cl	Cl-6 PCB
	361.8385	M+4	12C12 H4 35Cl4 37Cl2	Cl-6 PCB
	363.8356	M+6	12C12 H4 35Cl3 37Cl3	Cl-6 PCB
	371.8817	M+2	13C12 H4 35Cl5 37Cl	13C12 Cl-6 PCB
	373.8788	M+4	13C12 H4 35Cl4 37Cl2	13C12 Cl-6 PCB
	393.8025	M+2	12C12 H3 35Cl6 37Cl	Cl-7 PCB
	395.7995	M+4	12C12 H3 35Cl5 37Cl2	Cl-7 PCB
	397.7966	M+6	12C12 H3 35Cl4 37Cl3	Cl-7 PCB
	405.8428	M+2	13C12 H3 35Cl6 37Cl	13C12 Cl-7 PCB
	407.8398	M+4	13C12 H3 35Cl5 37Cl2	13C12 Cl-7 PCB
	427.7635	M+2	12C12 H2 35Cl7 37Cl	Cl-8 PCB
	429.7606	M+4	12C12 H2 35Cl6 37Cl2	Cl-8 PCB
	431.7576	M+6	12C12 H2 35Cl5 37Cl3	Cl-8 PCB
	439.8038	M+2	13C12 H2 35Cl7 37Cl	13C12 Cl-8 PCB
	441.8008	M+4	13C12 H2 35Cl6 37Cl2	13C12 Cl-8 PCB
Fn-6	393.8025	M+2	12C12 H3 35Cl6 37Cl	Cl-7 PCB
Cl-7,8,9,10	395.7995	M+4	12C12 H3 35Cl5 37Cl2	Cl-7 PCB
	397.7966	M+6	12C12 H3 35Cl4 37Cl3	Cl-7 PCB
	405.8428	M+2	13C12 H3 35Cl6 37Cl 13C12	Cl-7 PCB
	407.8398	M+4	13C12 H3 35Cl5 37Cl2	13C12 Cl-7 PCB
	427.7635	M+2	12C12 H2 35Cl7 37Cl	Cl-8 PCB
	429.7606	M+4	12C12 H2 35Cl6 37Cl2	Cl-8 PCB
	431.7576	M+6	12C12 H2 35Cl5 37Cl3	Cl-8 PCB
	439.8038	M+2	13C12 H2 35Cl7 37Cl	13C12 Cl-8 PCB
	441.8008	M+4	13C12 H2 35Cl6 37Cl2	13C12 Cl-8 PCB
	442.9728	QC	C10 F13	PFK
	454.9728	lock	C11 F13	PFK
	461.7246	M+2	12C12 H1 35Cl8 37Cl	Cl-9 PCB
	463.7216	M+4	12C12 H1 35Cl7 37Cl2	Cl-9 PCB
	465.7187	M+6	12C12 H1 35Cl6 37Cl3	Cl-9 PCB
	473.7648	M+2	13C12 H1 35Cl8 37Cl	13C12 Cl-9 PCB
	475.7619	M+4	13C12 H1 35Cl7 37Cl2	13C12 Cl-9 PCB
	495.6856	M+2	13C12 H4 35Cl9 37Cl	Cl-10 PCB
Fn-7	497.6826	M+4	12C12 35Cl8 37Cl2	Cl-10 PCB
	499.6797	M+6	12C12 35Cl7 37Cl3	Cl-10 PCB
	509.7229	M+4	13C12 H4 35Cl8 37Cl2	13C12 Cl-10 PCB
	511.7199	M+6	13C12 H4 35Cl8 37Cl4	13C12 Cl-10 PCB
	516.9697	lock	C13F19	PFK

Data Calculations:

a) Analyte Concentrations:

The relative response factor of each target relative to the standard against which it is to be calculated is determined using the area responses of both quantification ions via equation 9.1.
In cases where a native target is calculated against an exact labelled analogue, the quantification will be considered to be by isotope dilution. In other cases, the quantification will be considered to be by internal standard.

$$RRF = \frac{(A1_t + A2_t)\ C_s}{(A1_s + A2_s)\ C_t} \qquad \text{Equ. 9.1}$$

Where,
$A1_t + A2_t$ = The areas of the two quantification ions for the target analyte
$A1_s + A2_s$ = The areas of the two quantification ions for the labelled compound against which the target analyte will be calculated.
C_t = The concentration in the calibration standard of the target analyte.
C_s = The concentration in the calibration standard of the labelled compound against which the target will be calculated.

For all analytes to be quantified and from the initial calibration series of standard injections, a table of RRFs is prepared. The relative standard deviation (%RSD, or the coefficient of variance) is checked to confirm that the appropriate method criteria has been met as listed in Table 3. The average of the five or six levels of standard for each analyte, RRF_{av} is applied for quantification of samples according to Equations 9.2 and 9.3 below.

$$\text{Amount in sample (pg)} = \frac{(A1_n + A2_n)\ Q_l}{(A1_l + A2_l)\ (RRF_{av})} \qquad \text{Equ. 9.2}$$

$$\text{Concentration in sample (pg/g or pg/l)} = \frac{(A1_n + A2_n)\ Q_l}{(A1_l + A2_l)\ (RRF_{av})\ (W_s)} \qquad \text{Equ. 9.3}$$

Where,

Q_l = The amount (pg) of labelled compound added to the sample
W_s = The weight (g) or volume (l) of sample

b) Extraction, Clean-up, and Sampling Standard Recovery Calculation:

The extraction, clean-up, and sampling standard recoveries are determined by Equation 9.4 below.

% Recovery = (Amount in sample)/(Amount added to sample) X 100 Equ. 9.4

c) Estimated Detection Limit

$$EDL = \frac{2.5 \times H_x \times Q_{es}}{H_{es} \times W \times RFF_{av}} \qquad \text{Equ. 9.5}$$

Where,
EDL = estimated detection limit for homologous PCB
H_x = sum of the height of the noise level for each quantification ions for the unlabelled PCB.
H_{es} = Sum of the heights of responses of both quantification ions for the labelled extraction standard.
W = weight of volume of sample
RRF_{av} = average relative response factor
Q_{es} = Amount of extraction standard added

Chromatogram Annotation Codes

All manually integrated peaks are expanded and reprinted with the following annotations:

* Analyst Initials	AA
* Date	YYMMDD
* integration code	CC

The Syntax is:	Example:
AAYYMMDDCC	SK111220MB

Code	Mnemonic	Description
MB	Manual Baseline	The peak was manually integrated because the initial baseline was determined incorrectly by the software
MS	Manual Split	The peak was manually integrated because the peak was incorrectly or not split by the software
MJ/MC	Manual Join/Manual Combine	The peak was manually integrated because the peak was split by the software and the peak should be integrated as a single peak
MA	Manual Add	The peak was manually integrated because the signal:noise ratio was judged to be >2.5
MD	Manual Delete	The peak was excluded because the signal:noise ratio was judged to be <2.5
MX	Manual Exclude	The peak was excluded due to an interference
NH	Noise Height	The noise height for Estimated Detection Limit calculation was chosen by the analyst (automated noise height not appropriate)
MT	Manual Time	The peak retention time was manually chosen

The following explanatory annotation codes may appear on the chromatograms of peaks that have been reviewed:

Code	Mnemonic	Description
+	Detected Peak	A peak was detected at this mass and retention time that was above 2.5:1 signal to noise
<	Below Detection Limit	The signal at this mass and retention time was below 2.5:1 signal to noise
EMPC	Estimated Maximum Possible Concentration	The signal at this mass and retention time is an interference such that the target compound could not be confirmed
X-RT	Not Detected due to Retention Time non-conformance	The signal at this retention time could not be used to positively identify the target compound because of retention time non-conformance (apex of quantification and confirmation ions do not maximize within the same two seconds, or the retention time of the peak does not fall within the expected range with respect to its labeled analogue)
X-LOC	Not Detected due to interference from a higher level of chlorination	The signal at this retention time is attributable to a fragment from a co-eluting compound at a higher level of chlorination, and cannot be used to positively identify the target. The result is expressed as an Estimated Maximum Possible Concentration (EMPC)
X-DPE	Not Detected due to diphenyl ether interference	The signal at this retention time is attributable to interference from a chlorinated diphenyl ether, and cannot be used to positively identify the target. The result is expressed as an Estimated Maximum Possible Concentration (EMPC)
X-IF	Not Detected due to interference	The signal at this retention time is attributable to a co-eluting interference, and cannot be used to positively identify the target. The result is expressed as an Estimated Maximum Possible Concentration (EMPC)

1435 Norjohn Court, Unit 1, Burlington, ON, Canada L7L 0E6

SVOC DATA PACKAGE

SECTION 4: CALIBRATION DATA

Including:

for Multi-Point Calibration(s)

- Multi-Point Calibration Tables
- Individual Quantitation Reports

for Continuing Calibration(s)

- Individual Quantitation Reports

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Calibration Summary Report

Calibration Level	Filename	Run Date
CS-1	5-170307B03	07-Mar-2017 15:25
CS-2	5-170307B05	07-Mar-2017 16:48
CS-3	5-170307B01	07-Mar-2017 12:53
CS-4	5-170307B07	07-Mar-2017 18:08
CS-5	5-170307B06	07-Mar-2017 17:28

Approved: *E. Sabljic*
--e-signature--
28-Jun-2017

Relative Response Factors

Target Analytes	CS-1	CS-2	CS-3	CS-4	CS-5	Mean	% RSD
PCB-001	0.845	0.807	0.950	0.877	0.890	0.874	6%
PCB-003	0.874	0.827	0.977	0.892	0.901	0.894	6%
PCB-004	0.858	0.868	0.968	0.900	0.912	0.901	5%
PCB-015	1.139	1.111	1.370	1.187	1.214	1.204	8%
PCB-019	0.975	0.972	1.120	1.026	1.055	1.030	6%
PCB-037	0.819	0.852	0.974	0.936	0.964	0.909	8%
PCB-054	0.900	0.941	1.071	1.013	1.032	0.991	7%
PCB-081	0.871	0.905	1.014	0.942	0.942	0.935	6%
PCB-077	0.859	0.852	0.981	0.894	0.901	0.897	6%
PCB-104	1.018	1.057	1.201	1.114	1.122	1.102	6%
PCB-123	1.012	1.035	1.246	1.140	1.170	1.121	9%
PCB-118	1.123	1.165	1.389	1.269	1.273	1.244	8%
PCB-114	1.177	1.153	1.409	1.257	1.280	1.255	8%
PCB-105	1.110	1.098	1.338	1.203	1.218	1.193	8%
PCB-126	1.177	1.108	1.412	1.273	1.296	1.253	9%
PCB-155	0.927	1.019	1.201	1.094	1.095	1.067	10%
PCB-167	1.296	1.316	1.519	1.415	1.458	1.401	7%
PCB-156/157	1.246	1.289	1.493	1.375	1.395	1.360	7%
PCB-169	1.213	1.177	1.444	1.333	1.345	1.302	8%
PCB-188	0.785	0.802	0.934	0.854	0.876	0.850	7%
PCB-189	1.028	1.077	1.354	1.209	1.226	1.179	11%
PCB-202	0.985	0.952	1.124	1.035	1.029	1.025	6%
PCB-205	1.012	1.055	1.269	1.165	1.176	1.135	9%
PCB-208	0.817	0.794	0.938	0.863	0.889	0.860	7%
PCB-206	0.738	0.733	0.907	0.846	0.858	0.816	9%
PCB-209	0.968	0.935	1.243	1.069	1.091	1.061	11%
Extraction Standards							
13C12-PCB-001	0.839	0.908	0.898	0.925	0.935	0.901	4%
13C12-PCB-003	0.837	0.883	0.881	0.906	0.941	0.890	4%
13C12-PCB-004	0.639	0.641	0.629	0.650	0.658	0.643	2%
13C12-PCB-015	0.708	0.697	0.679	0.728	0.754	0.713	4%
13C12-PCB-019	0.555	0.556	0.540	0.566	0.574	0.558	2%
13C12-PCB-037	1.266	1.212	1.193	1.281	1.299	1.250	4%
13C12-PCB-054	1.169	1.200	1.187	1.232	1.235	1.205	2%
13C12-PCB-081	1.455	1.415	1.440	1.481	1.513	1.461	3%
13C12-PCB-077	1.513	1.471	1.461	1.506	1.555	1.501	2%
13C12-PCB-104	1.220	1.237	1.200	1.235	1.244	1.227	1%
13C12-PCB-123	0.976	0.945	0.942	0.946	0.964	0.955	2%
13C12-PCB-118	0.952	0.921	0.908	0.928	0.946	0.931	2%
13C12-PCB-114	0.919	0.900	0.871	0.905	0.908	0.901	2%
13C12-PCB-105	0.962	0.938	0.914	0.954	0.948	0.943	2%
13C12-PCB-126	0.894	0.861	0.851	0.898	0.861	0.873	2%
13C12-PCB-155	1.242	1.288	1.239	1.278	1.295	1.268	2%
13C12-PCB-167	1.093	1.095	1.100	1.124	1.089	1.100	1%
13C12-PCB-156/157	1.112	1.103	1.089	1.151	1.111	1.113	2%
13C12-PCB-169	1.074	1.055	1.043	1.112	1.092	1.075	3%
13C12-PCB-188	1.735	1.785	1.751	1.819	1.822	1.782	2%
13C12-PCB-189	0.909	0.936	0.919	0.981	0.961	0.941	3%
13C12-PCB-202	1.402	1.464	1.414	1.481	1.458	1.444	2%
13C12-PCB-205	1.252	1.253	1.238	1.256	1.259	1.252	1%
13C12-PCB-208	1.429	1.460	1.458	1.457	1.437	1.448	1%
13C12-PCB-206	0.963	0.991	0.966	0.983	0.990	0.979	1%
13C12-PCB-209	0.771	0.798	0.740	0.813	0.814	0.787	4%
Field Spike Standards							
13C12-PCB-031	1.177	1.172	1.120	1.127	1.094	1.138	3%
13C12-PCB-095	0.865	0.883	0.873	0.873	0.845	0.868	2%
13C12-PCB-153	0.891	0.883	0.887	0.861	0.853	0.875	2%
Cleanup Standards							
13C12-PCB-028	1.340	1.300	1.264	1.306	1.295	1.301	2%
13C12-PCB-111	1.252	1.212	1.200	1.197	1.219	1.216	2%
13C12-PCB-178	1.190	1.221	1.205	1.212	1.199	1.205	1%

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Calibration Report

ALS Sample ID **H5-17-CS1-0002**
Analysis Method EPA 1668C
Analysis Type Calibration

Filename	Inst #	Column	Run Date	Approved:	*E. Sabljic*
5-170307B03	HRMS-5	SPBOCTYL60165-02B	07-Mar-2017 15:25		--e-signature--
					28-Jun-2017

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	8.8	3.18	1.00	1.48E+04	0.845
PCB-003	10.34	3.02	1.00	1.53E+04	0.874
PCB-004	10.51	1.37	1.00	1.15E+04	0.858
PCB-015	14.21	1.59	1.00	1.68E+04	1.139
PCB-019	12.53	0.98	1.00	1.13E+04	0.975
PCB-037	18.16	0.95	1.00	1.26E+04	0.819
PCB-054	14.39	0.75	1.00	1.27E+04	0.900
PCB-081	21.75	0.74	1.00	1.36E+04	0.871
PCB-077	22.06	0.86	1.00	1.40E+04	0.859
PCB-104	17.47	1.56	1.00	1.34E+04	1.018
PCB-123	23.06	1.73	1.00	1.06E+04	1.012
PCB-118	23.25	1.70	1.00	1.15E+04	1.123
PCB-114	23.52	1.66	1.00	1.16E+04	1.177
PCB-105	23.89	1.64	1.00	1.15E+04	1.110
PCB-126	25.48	1.65	1.00	1.13E+04	1.177
PCB-155	20.49	1.38	1.00	1.24E+04	0.927
PCB-167	26.4	1.23	1.00	1.18E+04	1.296
PCB-156/157	27.01	1.34	2.00	2.32E+04	1.246
PCB-169	28.67	1.29	1.00	1.09E+04	1.213
PCB-188	23.49	0.97	1.00	1.14E+04	0.785
PCB-189	29.97	1.02	1.00	7.81E+03	1.028
PCB-202	26.27	0.91	1.00	1.16E+04	0.985
PCB-205	31.37	0.88	1.00	7.12E+03	1.012
PCB-208	29.7	0.77	1.00	6.57E+03	0.817
PCB-206	32.46	0.86	1.00	4.00E+03	0.738
PCB-209	33.62	1.24	1.00	4.20E+03	0.968
Extraction Standards					
13C12-PCB-001	8.78	3.15	100.00	1.75E+06	0.839
13C12-PCB-003	10.33	3.14	100.00	1.75E+06	0.837
13C12-PCB-004	10.51	1.57	100.00	1.33E+06	0.639
13C12-PCB-015	14.19	1.51	100.00	1.48E+06	0.708
13C12-PCB-019	12.51	1.04	100.00	1.16E+06	0.555
13C12-PCB-037	18.15	1.11	100.00	1.53E+06	1.266
13C12-PCB-054	14.37	0.80	100.00	1.42E+06	1.169
13C12-PCB-081	21.73	0.78	100.00	1.57E+06	1.455
13C12-PCB-077	22.04	0.79	100.00	1.63E+06	1.513
13C12-PCB-104	17.46	1.62	100.00	1.31E+06	1.220
13C12-PCB-123	23.05	1.64	100.00	1.05E+06	0.976
13C12-PCB-118	23.23	1.63	100.00	1.02E+06	0.952
13C12-PCB-114	23.52	1.63	100.00	9.88E+05	0.919
13C12-PCB-105	23.87	1.66	100.00	1.03E+06	0.962
13C12-PCB-126	25.46	1.66	100.00	9.62E+05	0.894
13C12-PCB-155	20.47	1.26	100.00	1.34E+06	1.242
13C12-PCB-167	26.38	1.29	100.00	9.14E+05	1.093
13C12-PCB-156/157	27.01	1.29	200.00	1.86E+06	1.112
13C12-PCB-169	28.67	1.30	100.00	8.99E+05	1.074
13C12-PCB-188	23.48	1.04	100.00	1.45E+06	1.735
13C12-PCB-189	29.95	1.09	100.00	7.60E+05	0.909
13C12-PCB-202	26.25	0.91	100.00	1.17E+06	1.402
13C12-PCB-205	31.35	0.95	100.00	7.04E+05	1.252
13C12-PCB-208	29.69	0.75	100.00	8.04E+05	1.429
13C12-PCB-206	32.44	0.75	100.00	5.42E+05	0.963
13C12-PCB-209	33.59	1.14	100.00	4.34E+05	0.771
Field Spike Standards					
13C12-PCB-031	15.74	1.11	100.00	1.58E+06	1.177
13C12-PCB-095	19.07	1.60	100.00	9.45E+05	0.865
13C12-PCB-153	24.17	1.31	100.00	9.09E+05	0.891
Cleanup Standards					
13C12-PCB-028	15.92	1.11	100.00	1.62E+06	1.340
13C12-PCB-111	21.99	1.60	100.00	1.35E+06	1.252
13C12-PCB-178	25.05	1.05	100.00	9.95E+05	1.190
Injection Standards					
13C12-PCB-9	11.77	1.58	100.00	2.09E+06	-
13C12-PCB-52	16.91	0.78	100.00	1.21E+06	-
13C12-PCB-101	20.61	1.59	100.00	1.08E+06	-
13C12-PCB-138	24.84	1.30	100.00	8.36E+05	-
13C12-PCB-194	31.07	0.96	100.00	5.62E+05	-

ALS Life sciences

Calibration Report

ALS Sample ID **H5-17-CS2-0002**
Analysis Method EPA 1668C
Analysis Type Calibration

Filename	Inst #	Column	Run Date	Approved:	*E. Sabljic*
5-170307B05	HRMS-5	SPBOCTYL60165-02B	07-Mar-2017 16:48		--e-signature--
					28-Jun-2017

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	8.78	3.40	5.00	8.42E+04	0.807
PCB-003	10.33	3.33	5.00	8.40E+04	0.827
PCB-004	10.49	1.44	5.00	6.39E+04	0.868
PCB-015	14.18	1.68	5.00	8.90E+04	1.111
PCB-019	12.51	1.07	5.00	6.20E+04	0.972
PCB-037	18.15	0.99	5.00	6.98E+04	0.852
PCB-054	14.37	0.77	5.00	7.63E+04	0.941
PCB-081	21.73	0.73	5.00	7.47E+04	0.905
PCB-077	22.03	0.74	5.00	7.31E+04	0.852
PCB-104	17.46	1.64	5.00	7.63E+04	1.057
PCB-123	23.05	1.62	5.00	5.71E+04	1.035
PCB-118	23.21	1.70	5.00	6.26E+04	1.165
PCB-114	23.51	1.74	5.00	6.05E+04	1.153
PCB-105	23.85	1.70	5.00	6.01E+04	1.098
PCB-126	25.45	1.60	5.00	5.56E+04	1.108
PCB-155	20.47	1.25	5.00	7.66E+04	1.019
PCB-167	26.38	1.25	5.00	6.28E+04	1.316
PCB-156/157	26.99	1.28	10.00	1.24E+05	1.289
PCB-169	28.67	1.21	5.00	5.41E+04	1.177
PCB-188	23.48	0.99	5.00	6.24E+04	0.802
PCB-189	29.95	1.08	5.00	4.40E+04	1.077
PCB-202	26.25	0.90	5.00	6.07E+04	0.952
PCB-205	31.35	0.92	5.00	3.92E+04	1.055
PCB-208	29.69	0.76	5.00	3.44E+04	0.794
PCB-206	32.44	0.76	5.00	2.15E+04	0.733
PCB-209	33.59	1.21	5.00	2.21E+04	0.935
Extraction Standards					
13C12-PCB-001	8.78	3.21	100.00	2.09E+06	0.908
13C12-PCB-003	10.31	3.16	100.00	2.03E+06	0.883
13C12-PCB-004	10.49	1.61	100.00	1.47E+06	0.641
13C12-PCB-015	14.18	1.55	100.00	1.60E+06	0.697
13C12-PCB-019	12.5	1.04	100.00	1.28E+06	0.556
13C12-PCB-037	18.13	1.12	100.00	1.64E+06	1.212
13C12-PCB-054	14.36	0.80	100.00	1.62E+06	1.200
13C12-PCB-081	21.72	0.78	100.00	1.65E+06	1.415
13C12-PCB-077	22.03	0.78	100.00	1.72E+06	1.471
13C12-PCB-104	17.44	1.55	100.00	1.44E+06	1.237
13C12-PCB-123	23.03	1.65	100.00	1.10E+06	0.945
13C12-PCB-118	23.21	1.64	100.00	1.07E+06	0.921
13C12-PCB-114	23.51	1.68	100.00	1.05E+06	0.900
13C12-PCB-105	23.85	1.65	100.00	1.09E+06	0.938
13C12-PCB-126	25.45	1.68	100.00	1.00E+06	0.861
13C12-PCB-155	20.46	1.26	100.00	1.50E+06	1.288
13C12-PCB-167	26.37	1.29	100.00	9.54E+05	1.095
13C12-PCB-156/157	26.99	1.31	200.00	1.92E+06	1.103
13C12-PCB-169	28.65	1.28	100.00	9.20E+05	1.055
13C12-PCB-188	23.46	1.04	100.00	1.56E+06	1.785
13C12-PCB-189	29.93	1.09	100.00	8.16E+05	0.936
13C12-PCB-202	26.24	0.90	100.00	1.28E+06	1.464
13C12-PCB-205	31.33	0.94	100.00	7.42E+05	1.253
13C12-PCB-208	29.67	0.75	100.00	8.65E+05	1.460
13C12-PCB-206	32.43	0.75	100.00	5.87E+05	0.991
13C12-PCB-209	33.57	1.15	100.00	4.73E+05	0.798
Field Spike Standards					
13C12-PCB-031	15.73	1.10	100.00	1.71E+06	1.172
13C12-PCB-095	19.04	1.57	100.00	1.03E+06	0.883
13C12-PCB-153	24.15	1.30	100.00	9.57E+05	0.883
Cleanup Standards					
13C12-PCB-028	15.89	1.10	100.00	1.76E+06	1.300
13C12-PCB-111	21.98	1.56	100.00	1.41E+06	1.212
13C12-PCB-178	25.04	1.05	100.00	1.06E+06	1.221
Injection Standards					
13C12-PCB-9	11.76	1.58	100.00	2.30E+06	-
13C12-PCB-52	16.9	0.78	100.00	1.35E+06	-
13C12-PCB-101	20.59	1.55	100.00	1.17E+06	-
13C12-PCB-138	24.82	1.29	100.00	8.72E+05	-
13C12-PCB-194	31.06	0.95	100.00	5.93E+05	-

ALS Life sciences

Calibration Report

ALS Sample ID **H5-17-CS3-0002**
Analysis Method EPA 1668C
Analysis Type Calibration

Filename	Inst #	Column	Run Date	Approved:	*E. Sabljic*
5-170307B01	HRMS-5	SPBOCTYL60165-02B	07-Mar-2017 12:53		--e-signature--
					28-Jun-2017

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	8.82	3.41	50.00	7.65E+05	0.950
PCB-003	10.36	3.41	50.00	7.72E+05	0.977
PCB-004	10.52	1.45	50.00	5.45E+05	0.968
PCB-015	14.23	1.61	50.00	8.35E+05	1.370
PCB-019	12.55	1.06	50.00	5.43E+05	1.120
PCB-037	18.18	0.95	50.00	6.13E+05	0.974
PCB-054	14.41	0.77	50.00	6.71E+05	1.071
PCB-081	21.77	0.73	50.00	6.90E+05	1.014
PCB-077	22.08	0.73	50.00	6.77E+05	0.981
PCB-104	17.49	1.56	50.00	6.81E+05	1.201
PCB-123	23.08	1.59	50.00	5.54E+05	1.246
PCB-118	23.26	1.61	50.00	5.96E+05	1.389
PCB-114	23.56	1.60	50.00	5.79E+05	1.409
PCB-105	23.9	1.60	50.00	5.78E+05	1.338
PCB-126	25.5	1.63	50.00	5.67E+05	1.412
PCB-155	20.51	1.24	50.00	7.03E+05	1.201
PCB-167	26.42	1.28	50.00	5.64E+05	1.519
PCB-156/157	27.04	1.29	100.00	1.10E+06	1.493
PCB-169	28.7	1.30	50.00	5.08E+05	1.444
PCB-188	23.51	0.99	50.00	5.52E+05	0.934
PCB-189	30	1.07	50.00	4.20E+05	1.354
PCB-202	26.28	0.88	50.00	5.37E+05	1.124
PCB-205	31.4	0.90	50.00	3.43E+05	1.269
PCB-208	29.72	0.77	50.00	2.98E+05	0.938
PCB-206	32.49	0.77	50.00	1.91E+05	0.907
PCB-209	33.63	1.23	50.00	2.01E+05	1.243
Extraction Standards					
13C12-PCB-001	8.8	3.22	100.00	1.61E+06	0.898
13C12-PCB-003	10.34	3.16	100.00	1.58E+06	0.881
13C12-PCB-004	10.52	1.62	100.00	1.13E+06	0.629
13C12-PCB-015	14.21	1.54	100.00	1.22E+06	0.679
13C12-PCB-019	12.53	1.02	100.00	9.69E+05	0.540
13C12-PCB-037	18.16	1.11	100.00	1.26E+06	1.193
13C12-PCB-054	14.41	0.79	100.00	1.25E+06	1.187
13C12-PCB-081	21.77	0.79	100.00	1.36E+06	1.440
13C12-PCB-077	22.06	0.79	100.00	1.38E+06	1.461
13C12-PCB-104	17.49	1.58	100.00	1.13E+06	1.200
13C12-PCB-123	23.08	1.68	100.00	8.90E+05	0.942
13C12-PCB-118	23.25	1.66	100.00	8.58E+05	0.908
13C12-PCB-114	23.54	1.69	100.00	8.22E+05	0.871
13C12-PCB-105	23.89	1.66	100.00	8.64E+05	0.914
13C12-PCB-126	25.48	1.65	100.00	8.04E+05	0.851
13C12-PCB-155	20.51	1.26	100.00	1.17E+06	1.239
13C12-PCB-167	26.4	1.29	100.00	7.43E+05	1.100
13C12-PCB-156/157	27.02	1.31	200.00	1.47E+06	1.089
13C12-PCB-169	28.68	1.30	100.00	7.04E+05	1.043
13C12-PCB-188	23.49	1.05	100.00	1.18E+06	1.751
13C12-PCB-189	29.98	1.09	100.00	6.21E+05	0.919
13C12-PCB-202	26.27	0.90	100.00	9.55E+05	1.414
13C12-PCB-205	31.38	0.93	100.00	5.40E+05	1.238
13C12-PCB-208	29.7	0.74	100.00	6.36E+05	1.458
13C12-PCB-206	32.48	0.75	100.00	4.22E+05	0.966
13C12-PCB-209	33.62	1.15	100.00	3.23E+05	0.740
Field Spike Standards					
13C12-PCB-031	15.76	1.09	100.00	1.25E+06	1.120
13C12-PCB-095	19.09	1.57	100.00	8.08E+05	0.873
13C12-PCB-153	24.2	1.30	100.00	7.44E+05	0.887
Cleanup Standards					
13C12-PCB-028	15.94	1.10	100.00	1.33E+06	1.264
13C12-PCB-111	22.01	1.58	100.00	1.13E+06	1.200
13C12-PCB-178	25.07	1.06	100.00	8.14E+05	1.205
Injection Standards					
13C12-PCB-9	11.79	1.59	100.00	1.79E+06	-
13C12-PCB-52	16.94	0.78	100.00	1.06E+06	-
13C12-PCB-101	20.62	1.55	100.00	9.45E+05	-
13C12-PCB-138	24.87	1.30	100.00	6.76E+05	-
13C12-PCB-194	31.11	0.95	100.00	4.36E+05	-

ALS Life sciences

Calibration Report

ALS Sample ID **H5-17-CS4-0002**
Analysis Method EPA 1668C
Analysis Type Calibration

Filename	Inst #	Column	Run Date	Approved:	*E. Sabljic*
5-170307B07	HRMS-5	SPBOCTYL60165-02B	07-Mar-2017 18:08		--e-signature--
					28-Jun-2017

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	8.78	3.33	400.00	7.60E+06	0.877
PCB-003	10.33	3.34	400.00	7.57E+06	0.892
PCB-004	10.51	1.44	400.00	5.47E+06	0.900
PCB-015	14.19	1.62	400.00	8.09E+06	1.187
PCB-019	12.51	1.05	400.00	5.44E+06	1.026
PCB-037	18.15	0.96	400.00	6.53E+06	0.936
PCB-054	14.37	0.78	400.00	6.79E+06	1.013
PCB-081	21.73	0.72	400.00	6.63E+06	0.942
PCB-077	22.04	0.73	400.00	6.41E+06	0.894
PCB-104	17.46	1.58	400.00	6.54E+06	1.114
PCB-123	23.05	1.61	400.00	5.13E+06	1.140
PCB-118	23.23	1.63	400.00	5.60E+06	1.269
PCB-114	23.52	1.63	400.00	5.41E+06	1.257
PCB-105	23.87	1.61	400.00	5.46E+06	1.203
PCB-126	25.45	1.63	400.00	5.43E+06	1.273
PCB-155	20.47	1.25	400.00	6.65E+06	1.094
PCB-167	26.38	1.28	400.00	5.58E+06	1.415
PCB-156/157	27.01	1.28	800.00	1.11E+07	1.375
PCB-169	28.67	1.28	400.00	5.20E+06	1.333
PCB-188	23.48	0.99	400.00	5.45E+06	0.854
PCB-189	29.95	1.07	400.00	4.16E+06	1.209
PCB-202	26.25	0.90	400.00	5.38E+06	1.035
PCB-205	31.35	0.91	400.00	3.66E+06	1.165
PCB-208	29.69	0.78	400.00	3.14E+06	0.863
PCB-206	32.44	0.79	400.00	2.08E+06	0.846
PCB-209	33.59	1.22	400.00	2.17E+06	1.069
Extraction Standards					
13C12-PCB-001	8.78	3.21	100.00	2.16E+06	0.925
13C12-PCB-003	10.31	3.19	100.00	2.12E+06	0.906
13C12-PCB-004	10.49	1.61	100.00	1.52E+06	0.650
13C12-PCB-015	14.18	1.53	100.00	1.70E+06	0.728
13C12-PCB-019	12.5	1.03	100.00	1.32E+06	0.566
13C12-PCB-037	18.13	1.11	100.00	1.74E+06	1.281
13C12-PCB-054	14.36	0.79	100.00	1.68E+06	1.232
13C12-PCB-081	21.72	0.79	100.00	1.76E+06	1.481
13C12-PCB-077	22.03	0.78	100.00	1.79E+06	1.506
13C12-PCB-104	17.44	1.57	100.00	1.47E+06	1.235
13C12-PCB-123	23.03	1.63	100.00	1.12E+06	0.946
13C12-PCB-118	23.21	1.66	100.00	1.10E+06	0.928
13C12-PCB-114	23.51	1.64	100.00	1.08E+06	0.905
13C12-PCB-105	23.85	1.64	100.00	1.13E+06	0.954
13C12-PCB-126	25.45	1.63	100.00	1.07E+06	0.898
13C12-PCB-155	20.46	1.23	100.00	1.52E+06	1.278
13C12-PCB-167	26.37	1.29	100.00	9.86E+05	1.124
13C12-PCB-156/157	26.99	1.30	200.00	2.02E+06	1.151
13C12-PCB-169	28.65	1.29	100.00	9.76E+05	1.112
13C12-PCB-188	23.46	1.05	100.00	1.60E+06	1.819
13C12-PCB-189	29.95	1.09	100.00	8.61E+05	0.981
13C12-PCB-202	26.24	0.91	100.00	1.30E+06	1.481
13C12-PCB-205	31.33	0.94	100.00	7.85E+05	1.256
13C12-PCB-208	29.67	0.75	100.00	9.11E+05	1.457
13C12-PCB-206	32.43	0.75	100.00	6.15E+05	0.983
13C12-PCB-209	33.57	1.14	100.00	5.08E+05	0.813
Field Spike Standards					
13C12-PCB-031	15.73	1.10	100.00	1.73E+06	1.127
13C12-PCB-095	19.05	1.55	100.00	1.04E+06	0.873
13C12-PCB-153	24.15	1.30	100.00	9.66E+05	0.861
Cleanup Standards					
13C12-PCB-028	15.89	1.11	100.00	1.78E+06	1.306
13C12-PCB-111	21.98	1.57	100.00	1.42E+06	1.197
13C12-PCB-178	25.04	1.06	100.00	1.06E+06	1.212
Injection Standards					
13C12-PCB-9	11.76	1.59	100.00	2.34E+06	-
13C12-PCB-52	16.9	0.79	100.00	1.36E+06	-
13C12-PCB-101	20.59	1.57	100.00	1.19E+06	-
13C12-PCB-138	24.84	1.30	100.00	8.77E+05	-
13C12-PCB-194	31.06	0.93	100.00	6.25E+05	-

ALS Life sciences

Calibration Report

ALS Sample ID **H5-17-CS5-0002**
Analysis Method EPA 1668C
Analysis Type Calibration

Filename	Inst #	Column	Run Date	Approved:	*E. Sabljic*
5-170307B06	HRMS-5	SPBOCTYL60165-02B	07-Mar-2017 17:28		--e-signature-- 28-Jun-2017

Target Analytes	Ret. Time	Ion Ratio	Concentration ng/mL	Response	RRF
PCB-001	8.8	3.33	2000.00	4.00E+07	0.890
PCB-003	10.33	3.34	2000.00	4.08E+07	0.901
PCB-004	10.51	1.44	2000.00	2.89E+07	0.912
PCB-015	14.19	1.62	2000.00	4.40E+07	1.214
PCB-019	12.51	1.05	2000.00	2.91E+07	1.055
PCB-037	18.15	0.96	2000.00	3.51E+07	0.964
PCB-054	14.39	0.79	2000.00	3.58E+07	1.032
PCB-081	21.75	0.74	2000.00	3.53E+07	0.942
PCB-077	22.04	0.72	2000.00	3.47E+07	0.901
PCB-104	17.46	1.56	2000.00	3.46E+07	1.122
PCB-123	23.05	1.61	2000.00	2.79E+07	1.170
PCB-118	23.23	1.62	2000.00	2.98E+07	1.273
PCB-114	23.52	1.63	2000.00	2.88E+07	1.280
PCB-105	23.87	1.61	2000.00	2.86E+07	1.218
PCB-126	25.46	1.62	2000.00	2.77E+07	1.296
PCB-155	20.47	1.24	2000.00	3.51E+07	1.095
PCB-167	26.38	1.28	2000.00	2.86E+07	1.458
PCB-156/157	27.01	1.28	4000.00	5.58E+07	1.395
PCB-169	28.67	1.28	2000.00	2.64E+07	1.345
PCB-188	23.49	0.99	2000.00	2.87E+07	0.876
PCB-189	29.97	1.07	2000.00	2.12E+07	1.226
PCB-202	26.25	0.89	2000.00	2.70E+07	1.029
PCB-205	31.37	0.90	2000.00	1.86E+07	1.176
PCB-208	29.7	0.78	2000.00	1.61E+07	0.889
PCB-206	32.44	0.79	2000.00	1.07E+07	0.858
PCB-209	33.6	1.22	2000.00	1.12E+07	1.091
Extraction Standards					
13C12-PCB-001	8.78	3.24	100.00	2.25E+06	0.935
13C12-PCB-003	10.33	3.18	100.00	2.26E+06	0.941
13C12-PCB-004	10.49	1.60	100.00	1.58E+06	0.658
13C12-PCB-015	14.18	1.52	100.00	1.81E+06	0.754
13C12-PCB-019	12.5	1.05	100.00	1.38E+06	0.574
13C12-PCB-037	18.13	1.12	100.00	1.82E+06	1.299
13C12-PCB-054	14.37	0.79	100.00	1.73E+06	1.235
13C12-PCB-081	21.73	0.78	100.00	1.88E+06	1.513
13C12-PCB-077	22.03	0.78	100.00	1.93E+06	1.555
13C12-PCB-104	17.46	1.57	100.00	1.54E+06	1.244
13C12-PCB-123	23.05	1.63	100.00	1.19E+06	0.964
13C12-PCB-118	23.21	1.64	100.00	1.17E+06	0.946
13C12-PCB-114	23.51	1.65	100.00	1.12E+06	0.908
13C12-PCB-105	23.85	1.64	100.00	1.17E+06	0.948
13C12-PCB-126	25.45	1.64	100.00	1.07E+06	0.861
13C12-PCB-155	20.47	1.25	100.00	1.61E+06	1.295
13C12-PCB-167	26.37	1.31	100.00	9.80E+05	1.089
13C12-PCB-156/157	26.99	1.29	200.00	2.00E+06	1.111
13C12-PCB-169	28.65	1.30	100.00	9.83E+05	1.092
13C12-PCB-188	23.48	1.06	100.00	1.64E+06	1.822
13C12-PCB-189	29.95	1.08	100.00	8.65E+05	0.961
13C12-PCB-202	26.24	0.91	100.00	1.31E+06	1.458
13C12-PCB-205	31.35	0.96	100.00	7.92E+05	1.259
13C12-PCB-208	29.69	0.75	100.00	9.04E+05	1.437
13C12-PCB-206	32.43	0.75	100.00	6.23E+05	0.990
13C12-PCB-209	33.57	1.15	100.00	5.12E+05	0.814
Field Spike Standards					
13C12-PCB-031	15.73	1.10	100.00	1.75E+06	1.094
13C12-PCB-095	19.05	1.53	100.00	1.06E+06	0.845
13C12-PCB-153	24.17	1.30	100.00	9.74E+05	0.853
Cleanup Standards					
13C12-PCB-028	15.91	1.10	100.00	1.82E+06	1.295
13C12-PCB-111	21.98	1.57	100.00	1.51E+06	1.219
13C12-PCB-178	25.04	1.08	100.00	1.08E+06	1.199
Injection Standards					
13C12-PCB-9	11.76	1.59	100.00	2.40E+06	-
13C12-PCB-52	16.91	0.78	100.00	1.40E+06	-
13C12-PCB-101	20.59	1.57	100.00	1.24E+06	-
13C12-PCB-138	24.84	1.31	100.00	9.00E+05	-
13C12-PCB-194	31.07	0.94	100.00	6.29E+05	-

Sample Name: 5-170622B01   Sample ID: H5-17-WDM-0391

	Target Analyte	#Hom	Resp	Ra	Ra fail=YES	RT	Conc.	H/A	ical RRF	User RF	%Rec	Mod.Date	Mod.Comment	Code Comments	Noise 1	Noise 2	Ion1 Ht	Ion2 Ht	Ion1 s/n	Ion2 s/n	Ion1 Area	Ion2 Area	RRT	RT LCL	RT UCL	Acq.Date	Acq.Time	ID	Spl Size
1	* PCB-1		672271.5	3.498	NO	8.86	27.07147	19.952		0.874	108.3				1260	1145	10430842	2976776	8281.2	2598.8	522801.4	149470.1	1.0019	8.83	8.9	22-Jun-17	18:28:01	H5-17-WDM-0391	1
2	PCB-2		642020.1	3.477	NO	10.28	25	19.385	0.938		100				1260	1145	9665884	2771105	7673.9	2419.3	498623.8	143396.3	0.9889	10.24	10.31	22-Jun-17	18:28:01	H5-17-WDM-0391	1
3	PCB-3		654901.1	3.562	NO	10.39	27.83673	19.023		0.894	111.3				1260	1145	9727401	2749202	7722.7	2400.2	511342.9	143558.2	1	10.36	10.43	22-Jun-17	18:28:01	H5-17-WDM-0391	1
4	*PCB-4		455365.7	1.317	NO	10.57	25.74268	19.556		0.901	103	23-Jun-17	ES170623MB		2873	1995	5062513	3846220	1761.9	1928.2	258878.3	196487.4	1.0015	10.54	10.61	22-Jun-17	18:28:01	H5-17-WDM-0391	1
5	PCB-10		658092.4	1.336	NO	10.69	25	19.346	1.363		100	23-Jun-17	ES170623MB		2873	1995	7280286	5462432	2533.8	2738.4	376324.6	281767.9	1.0125	10.66	10.72	22-Jun-17	18:28:01	H5-17-WDM-0391	1
6	PCB-9		691916.6	1.353	NO	11.84	25	18.609	1.433		100				2873	1995	7402964	5498027	2576.5	2756.3	397814.3	294102.3	1.1214	11.81	11.87	22-Jun-17	18:28:01	H5-17-WDM-0391	1
7	PCB-7		656054	1.325	NO	11.95	25	19.144	1.359		100				2873	1995	7158280	5392789	2491.3	2703.5	373913.1	282140.8	1.1323	11.92	11.99	22-Jun-17	18:28:01	H5-17-WDM-0391	1
8	PCB-6		680614.2	1.339	NO	12.1	25	18.596	1.41		100				2873	1995	7246429	5462256	2522	2738.3	389667.3	290946.8	1.1464	12.07	12.14	22-Jun-17	18:28:01	H5-17-WDM-0391	1
9	PCB-5		627285.8	1.324	NO	12.32	25	18.214	1.299		100				2873	1995	6509077	4835391	2265.4	2424.1	357361.2	269924.6	1.1666	12.28	12.35	22-Jun-17	18:28:01	H5-17-WDM-0391	1
10	PCB-8		677294.2	1.374	NO	12.38	25	19.438	1.403		100				2873	1995	7619937	5586086	2652	2800.4	392014.5	285279.7	1.1728	12.35	12.42	22-Jun-17	18:28:01	H5-17-WDM-0391	1
11	* PCB-14		714590.1	1.588	NO	13.37	25	18.24	1.48		100				1755	1244	7997506	4973065	4555.9	3996.4	438457.1	276133	0.939	13.34	13.41	22-Jun-17	18:28:01	H5-17-WDM-0391	1
12	PCB-11		669928.6	1.596	NO	13.88	25	18.445	1.387		100				1755	1244	7596096	4763033	4327.3	3827.6	411832.2	258096.5	0.9747	13.85	13.91	22-Jun-17	18:28:01	H5-17-WDM-0391	1
13	PCB-13/12		1274690.2	1.568	NO	14.08	50	14.296	1.32		100				1755	1244	11126991	7094282	6338.7	5701.1	778321.2	496369	0.9885	14.04	14.11	22-Jun-17	18:28:01	H5-17-WDM-0391	1
14	PCB-15		708801.6	1.57	NO	14.26	30.99354	18.278		1.204	124				1755	1244	7914686	5060813	4508.8	4066.9	433022.8	275778.8	1.0012	14.22	14.29	22-Jun-17	18:28:01	H5-17-WDM-0391	1
15	* PCB-19		370926.5	1.083	NO	12.6	26.00346	17.944		1.03	104				629	593	3460572	3217414	5497.8	5426.2	192854.7	178071.8	1.0013	12.56	12.63	22-Jun-17	18:28:01	H5-17-WDM-0391	1
16	* PCB-30/18		755695.4	1.016	NO	13.68	50	14.451	0.888		100				333	682	5504768	5375321	16516.5	7877.7	380920.3	374775.2	1.0878	13.65	13.72	22-Jun-17	18:28:01	H5-17-WDM-0391	1
17	PCB-17		299909.8	1.038	NO	13.95	25	18.455	0.705		100				333	682	2819067	2728987	8458.3	3999.4	152753.3	147156.6	1.1087	13.91	13.98	22-Jun-17	18:28:01	H5-17-WDM-0391	1
18	PCB-27		469205.7	1.028	NO	14.08	25	18.278	1.103		100				333	682	4347041	4224688	13042.9	6191.4	237832.8	231373	1.1191	14.04	14.11	22-Jun-17	18:28:01	H5-17-WDM-0391	1
19	PCB-24		437183.7	1.055	NO	14.16	25	18.414	1.028		100				333	682	4133401	3946301	12401.9	5783.4	224475.1	212708.6	1.1256	14.13	14.19	22-Jun-17	18:28:01	H5-17-WDM-0391	1
20	PCB-16		253094.5	1.046	NO	14.24	25	19.484	0.595		100				333	682	2521305	2436746	7564.9	3571.1	129406.8	123687.7	1.1321	14.21	14.27	22-Jun-17	18:28:01	H5-17-WDM-0391	1
21	PCB-32		509851.1	1.034	NO	14.54	25	17.634	1.199		100				333	682	4571394	4346690	13716	6370.2	259240	250611.1	1.1556	14.5	14.57	22-Jun-17	18:28:01	H5-17-WDM-0391	1
22	* PCB-34		489096.3	0.879	NO	15.23	25	18.144	1.15		100				1444	21776	4150752	4675134	2875.4	214.7	228770.3	260326	0.8371	15.2	15.26	22-Jun-17	18:28:01	H5-17-WDM-0391	1
23	PCB-23		478019	0.913	NO	15.33	25	17.955	1.124		100				1444	21776	4096845	4453256	2838.1	204.5	228172.7	249846.4	0.8425	15.3	15.36	22-Jun-17	18:28:01	H5-17-WDM-0391	1
24	PCB-29/26		859187	0.907	NO	15.51	50	16.136	1.01		100				1444	21776	6593700	7247523	4567.8	332.8	408628.2	450558.8	0.8524	15.48	15.54	22-Jun-17	18:28:01	H5-17-WDM-0391	1
25	PCB-25		533381.8	0.89	NO	15.63	25	16.518	1.254		100				1444	21776	4147630	4667427	2873.3	214.3	251099.9	282281.9	0.8588	15.59	15.66	22-Jun-17	18:28:01	H5-17-WDM-0391	1
26	PCB-31		502142.1	0.901	NO	15.81	25	18.004	1.18		100				1444	21776	4284923	4780538	2968.4	219.5	238002.1	264140	0.8687	15.77	15.84	22-Jun-17	18:28:01	H5-17-WDM-0391	1
27	PCB-28/20		953276.3	0.904	NO	15.99	50	14.437	1.121		100				1444	21776	6532752	7257121	4525.6	333.3	452496.9	500779.4	0.8787	15.96	16.02	22-Jun-17	18:28:01	H5-17-WDM-0391	1
28	PCB-21/33		1027585.3	0.886	NO	16.12	50	15.02	1.208		100				1444	21776	7248857	8135997	5021.7	373.6	482605.3	544980.1	0.8859	16.09	16.15	22-Jun-17	18:28:01	H5-17-WDM-0391	1
29	PCB-22		474297.8	0.888	NO	16.35	25	17.942	1.115		100				1444	21776	4003567	4517609	2773.5	207.5	223136.7	251161.1	0.8986	16.32	16.38	22-Jun-17	18:28:01	H5-17-WDM-0391	1
30	PCB-36		550780.8	0.897	NO	17.19	25	15.896	1.295		100				1444	21776	4140274	4533306	2868.2	208.2	260462.3	290318.4	0.9448	17.16	17.23	22-Jun-17	18:28:01	H5-17-WDM-0391	1
31	PCB-39		468588.2	0.891	NO	17.39	25	17.418	1.102		100				1444	21776	3846327	4320155	2664.5	198.4	220822.6	247765.6	0.9556	17.36	17.42	22-Jun-17	18:28:01	H5-17-WDM-0391	1
32	PCB-38		515508.9	0.907	NO	17.74	25	17.673	1.212		100				1444	21776	4333877	4766083	3002.3	218.9	245221.3	270287.6	0.9747	17.7	17.77	22-Jun-17	18:28:01	H5-17-WDM-0391	1
33	PCB-35		472317.3	0.895	NO	17.98	25	17.758	1.11		100				1444	21776	3961254	4441989	2744.2	204	223069.6	249247.7	0.9882	17.95	18.02	22-Jun-17	18:28:01	H5-17-WDM-0391	1
34	PCB-37		475871.6	0.885	NO	18.21	25.94184	17.22		0.909	103.8				1444	21776	3846018	4372800	2664.3	200.8	223351.7	252519.9	1.0009	18.18	18.25	22-Jun-17	18:28:01	H5-17-WDM-0391	1
35	* PCB-54		1013067.7	0.797	NO	14.45	54.64366	18.689		0.991	109.3				442	871	8399714	10529004	18985.8	12086.9	449439.8	563627.9	1.0011	14.42	14.49	22-Jun-17	18:28:01	H5-17-WDM-0391	1
36	* PCB-50/53		1396950.6	0.668	NO	15.68	100	17.39	0.668		100				907	1003	9732310	14399724	10729.3	14356.9	559640.3	837310.3	1.0857	15.64	15.71	22-Jun-17	18:28:01	H5-17-WDM-0391	1
37	PCB-45/51		1340173.4	0.672	NO	16.07	100	15.026	0.641		100				907	1003	8094867	12029894	8924.1	11994.1	538719.3	801454.1	1.1131	16.04	16.1	22-Jun-17	18:28:01	H5-17-WDM-0391	1
38	PCB-46		550690.5	0.661	NO	16.24	50	17.535	0.527		100				907	1003	3844415	5865553	4238.3	5848.1	219239.1	331451.4	1.1245	16.2	16.27	22-Jun-17	18:28:01	H5-17-WDM-0391	1
39	PCB-52		645700	0.666	NO	16.98	50	19.376	0.617		100				907	1003	5000460	7505645	5512.7	7483.3	258071.7	387628.3	1.1759	16.94	17.01	22-Jun-17	18:28:01	H5-17-WDM-0391	1
40	PCB-73		1000114.3	0.668	NO	17.06	50	16.747	0.956		100				907	1003	6704390	10016558	7391.2	9986.8	400331	599783.3	1.1816	17.03	17.09	22-Jun-17	18:28:01	H5-17-WDM-0391	1
41	PCB-43		632999.7	0.671	NO	17.13	50	17.739	0.605		100				907	1003	4510670	6757426	4972.8	6737.3	254279.4	378720.3	1.1861	17.09	17.16	22-Jun-17	18:28:01	H5-17-WDM-0391	1
42	PCB-69/49		1652498.7	0.672	NO	17.22	100	13.002	0.79		100				907	1003	8634485	12928783	9519	12890.4	664084	988414.7	1.193	17.19	17.26	22-Jun-17	18:28:01	H5-17-WDM-0391	1
43	PCB-48		685769.6	0.675	NO	17.42	50	17.932	0.656		100				907	1003	4953805	7296223	5461.3	7274.5	276250.7	409518.9	1.2067	17.39	17.46	22-Jun-17	18:28:01	H5-17-WDM-0391	1
44	PCB-44/47/65		2216681.7	0.671	NO	17.55	150	17.153	0.707		100				907	1003	15263359	22906362	16827	22838.3	889816.9	1326865	1.2158	17.52	17.59	22-Jun-17	18:28:01	H5-17-WDM-0391	1
45	PCB-59/62/75		2744815.3	0.673	NO	17.72	150	16.734	0.875		100				907	1003	18476948	27674366	20369.8	27592.1	1104136	1640680	1.2272	17.69	17.75	22-Jun-17	18:28:01	H5-17-WDM-0391	1
46	PCB-42		650162.1	0.672	NO	17.85	50	17.278	0.622		100				907	1003	4514914	6722344	4977.4	6702.4	261314.7	388847.4	1.2364	17.82	17.88	22-Jun-17	18:28:01	H5-17-WDM-0391	1
47	PCB-41/71/40		2073551.7	0.659	NO	18.11	150	11.957	0.661		100				907	1003	9845981	14944532	10854.6	14900.1	823436.2	1250116	1.2546	18.08	18.15	22-Jun-17	18:28:01	H5-17-WDM-0391	1
48	PCB-64		962343.7	0.668	NO	18.23	50	17.477	0.92		100				907	1003	6736670	10213823	7426.8	10183.5	385452.3	576891.4	1.2626	18.2	18.26	22-Jun-17	0.769456	H5-17-WDM-0391	1
49	* PCB-72		914585.2	0.66	NO	18.65	50	17.313	0.875		100				1	1	6298294	9440370	6298294	9440370	363792.5	550792.7	0.8553	18.61	18.68	22-Jun-17	0.769456	H5-17-WDM-0391	1
50	PCB-68		1074350.3	0.68	NO	18.79	50	16.506	1.027		100				1	1	7175944	10836241	7175944	10836241	434755.1	639595.2	0.8621	18.76	18.83	22-Jun-17	0.769456	H5-17-WDM-0391	1
51	PCB-57		928486.1	0.673	NO	19.04	50	17.92	0.888		100	23-Jun-17	ES170623MB		1	1	6694550	9966920	6694550	9966920	373582.9	554903.2	0.8733	19	19.07	22-Jun-17	0.769456	H5-17-WDM-0391	1
52	PCB-58		896293	0.665	NO	19.17	50	16.928	0.857		100	23-Jun-17	ES170623MB		1	1	6061071	9132211	6061071	9132211	358056	538237	0.8793	19.13	19.2	22-Jun-17	18:28:01	H5-17-WDM-0391	1
53	PCB-67		1001850.4	0.675	NO	19.27	50	16.907	0.958		100	23-Jun-17	ES170623MB		1	1	6826080	10049031	6826080	10049031	403754	598096.4	0.8838	19.23	19.3	22-Jun-17	18:28:01	H5-17-WDM-0391	1
54	PCB-63		960416.3	0.663	NO	19.41	50	16.581	0.918		100	23-Jun-17	ES170623MB		1	1	6348508	9506703	6348508	9506703	382870.4	577545.9	0.8906	19.38	19.45	22-Jun-17	18:28:01	H5-17-WDM-0391	1
55	PCB-61/70/74/76		3647721.3	0.673	NO	19.59	200	10.866	0.872		100	23-Jun-17	ES170623MB		1	1	15941370	23654980	15941370	23654980	1467064	2180657	0.8988	19.56	19.63	22-Jun-17	18:28:01	H5-17-WDM-0391	1
56	PCB-66		936544.1	0.668	NO	19.77	50	17.176	0.896		100	23-Jun-17	ES170623MB		1	1	6442824	9564084	6442824	9564084	375100.8	561443.3	0.9071	19.74	19.81	22-Jun-17	18:28:01	H5-17-WDM-0391	1
57	PCB-55		884902.3	0.675	NO	19.87	50	17.691	0.846		100	23-Jun-17	ES170623MB		1	1	6307994	9379084	6307994	9379084	356564.3	528338	0.9116	19.84	19.9	22-Jun-17	18:28:01	H5-17-WDM-0391	1
58	PCB-56		923867.8	0.669	NO	20.15	50	17.64	0.883		100				1	1	6535711	9678220	6535711	9678220	370499.4	553368.4	0.9243	20.11	20.18	22-Jun-17	18:28:01	H5-17-WDM-0391	1
59	PCB-60		916733.1	0.668	NO	20.26	50	17.444	0.877		100				1	1	6401169	9616411	6401169	9616411	366959.4	549773.7	0.9295	20.23	20.3	22-Jun-17	18:28:01	H5-17-WDM-0391	1
60	PCB-80		940997.3	0.666	NO	20.41	50	17.454	0.9		100				1	1	6565336	9768306	6565336	9768306	376147.1	564850.2	0.9363	20.38	20.44	22-Jun-17	18:28:01	H5-17-WDM-0391	1
61	PCB-79		1018346.9	0.672	NO	21.24	50	15.944	0.974		100				1	1	6523480	9800761	6523480	9800761	409158.6	609188.3	0.9745	21.21	21.28	22-Jun-17	18:28:01	H5-17-WDM-0391	1
62	PCB-78		941260.8	0.668	NO	21.55	50	16.672	0.9		100	23-Jun-17	ES170623MB		1	1	6281713	9442628	6281713	9442628	376791.8	564469	0.9888	21.52	21.59	22-Jun-17	18:28:01	H5-17-WDM-0391	1
63	PCB-81		932808.1	0.66	NO	21.8	45.14855	16.699		0.935	90.3				1	1	6191943	9386628	6191943	9386628	370790.3	562017.8	1	21.76	21.83	22-Jun-17	18:28:01	H5-17-WDM-0391	1
64	PCB-77		944939.2	0.659	NO	22.11	47.96294	17.386		0.898	95.9				1	1	6522827	9712723	6522827	9712723	375174.5	569764.7	1.0007	22.08	22.14	22-Jun-17	18:28:01	H5-17-WDM-0391	1
65	* PCB-104		873447.1	1.598	NO	17.52	49.56709	17.984		1.102	99.1				504	711	9661136	6053132	19171.5	8509.7	537197.6	336249.5	1.0009	17.49	17.55	22-Jun-17	18:28:01	H5-17-WDM-0391	1
66	PCB-96		827148	1.599	NO	17.75	50	17.713	1.125		100				504	711	9013406	5675706	17886.1	7979.1	508848.5	318299.5	1.0141	17.72	17.79	22-Jun-17	18:28:01	H5-17-WDM-0391	1
67	* PCB-103		697367.6	1.589	NO	18.74	50	18.015	0.948		100				658708	628956	7711245	4821295	11.7	7.7	428047.4	269320.2	1.0707	18.71	18.78	22-Jun-17	18:28:01	H5-17-WDM-0391	1
68	PCB-94		609506.8	1.567	NO	18.89	50	17.284	0.829		100				658708	628956	6431412	4070751	9.8	6.5	372105.5	237401.2	1.0791	18.86	18.92	22-Jun-17	18:28:01	H5-17-WDM-0391	1
69	PCB-95		580706.9	1.591	NO	19.14	50	18.233	0.79		100				658708	628956	6501293	4049129	9.9	6.4	356559.1	224147.8	1.0931	19.1	19.17	22-Jun-17	18:28:01	H5-17-WDM-0391	1
70	PCB-100/93/102/98		2593804.9	1.594	NO	19.33	200	5.512	0.882		100	23-Jun-17	ES170623MJ		658708	628956	8785131	5564614	13.3	8.8	1593732	1000073	1.1043	19.3	19.36	22-Jun-17	18:28:01	H5-17-WDM-0391	1
71	PCB-88/91		1253476.6	1.568	NO	19.58	100	11.451	0.852		100				658708	628956	8765149	5565698	13.3	8.8	765432.4	488044.3	1.1183	19.54	19.61	22-Jun-17	18:28:01	H5-17-WDM-0391	1
72	PCB-84		536198.2	1.617	NO	19.74	50	17.844	0.729		100				658708	628956	5911773	3647052	9	5.8	331305.7	204892.6	1.1277	19.71	19.77	22-Jun-17	18:28:01	H5-17-WDM-0391	1
73	PCB-89		600643.4	1.596	NO	19.98	50	17.472	0.817		100				658708	628956	6451918	4057671	9.8	6.5	369270.1	231373.3	1.1417	19.95	20.02	22-Jun-17	18:28:01	H5-17-WDM-0391	1
74	PCB-121		905809.3	1.576	NO	20.13	50	17.112	1.232		100				658708	628956	9482400	5946620	14.4	9.5	554134.8	351674.4	1.1501	20.1	20.17	22-Jun-17	18:28:01	H5-17-WDM-0391	1
75	PCB-92		626549	1.639	NO	20.34	50	17.267	0.852		100				658708	628956	6719350	4126827	10.2	6.6	389149.3	237399.7	1.1622	20.31	20.38	22-Jun-17	18:28:01	H5-17-WDM-0391	1
76	PCB-113/90/101		2036324.7	1.567	NO	20.65	150	14.254	0.923		100				658708	628956	17720318	11131482	26.9	17.7	1243160	793164.8	1.1799	20.62	20.69	22-Jun-17	18:28:01	H5-17-WDM-0391	1
77	PCB-83/99		1311944.7	1.609	NO	20.97	100	12.991	0.892		100				658708	628956	10510993	6430604	16	10.2	809077.1	502867.7	0.9077	20.93	21	22-Jun-17	18:28:01	H5-17-WDM-0391	1
78	PCB-112		785746.2	1.593	NO	21.05	50	17.937	1.068		100				658708	628956	8658849	5527731	13.1	8.8	482729.1	303017.1	0.9112	21.01	21.08	22-Jun-17	18:28:01	H5-17-WDM-0391	1
79	PCB-109/119/86/97/125/87		4357592.8	1.593	NO	21.24	300	9.739	0.988		100	27-Jun-17	ES170627MA		658708	628956	26074284	16327478	39.6	26	2677266	1680327	0.9197	21.21	21.28	22-Jun-17	18:28:01	H5-17-WDM-0391	1
80	PCB-117/116/85/110/115		3931021	1.594	NO	21.65	250	5.72	1.069		100	23-Jun-17	ES170623MJ		658708	628956	13818021	8727263	21	13.9	2415829	1515193	0.9374	21.62	21.68	22-Jun-17	18:28:01	H5-17-WDM-0391	1
81	PCB-82		547062.4	1.607	NO	21.93	50	16.83	0.744		100				658708	628956	5675473	3587982	8.6	5.7	337219.8	209842.6	0.9494	21.9	21.96	22-Jun-17	18:28:01	H5-17-WDM-0391	1
82	PCB-111		876542	1.59	NO	22.04	50	17.303	1.192		100				658708	628956	9311081	5843677	14.1	9.3	538111.2	338430.8	0.9544	22.01	22.08	22-Jun-17	18:28:01	H5-17-WDM-0391	1
83	PCB-120		922561.2	1.583	NO	22.29	50	16.773	1.255		100	23-Jun-17	ES170623MB		658708	628956	9484023	6064597	14.4	9.6	565442.7	357118.5	0.965	22.25	22.32	22-Jun-17	18:28:01	H5-17-WDM-0391	1
84	* PCB-108/124		1825112.1	1.624	NO	22.92	100	16.907	1.241		100	23-Jun-17	ES170623MB		3856	2666	19098042	11940372	4952.4	4478.5	1129609	695503.1	0.9922	22.88	22.95	22-Jun-17	18:28:01	H5-17-WDM-0391	1
85	PCB-107		951061.7	1.577	NO	23.05	50	16.762	1.293		100				3856	2666	9755547	6132818	2529.7	2300.2	582013.6	369048.1	0.9979	23.01	23.08	22-Jun-17	18:28:01	H5-17-WDM-0391	1
86	PCB-123		861719.1	1.581	NO	23.11	52.58495	18.428		1.121	105.2				3856	2666	9726431	6175386	2522.2	2316.2	527793.4	333925.7	1.0007	23.08	23.15	22-Jun-17	18:28:01	H5-17-WDM-0391	1
87	PCB-106		883090.2	1.581	NO	23.2	50	16.361	1.201		100				3856	2666	8850470	5611381	2295	2104.7	540961.3	342128.9	0.9972	23.16	23.23	22-Jun-17	18:28:01	H5-17-WDM-0391	1
88	PCB-118		992020.3	1.569	NO	23.28	55.76999	16.387		1.244	111.5				3856	2666	9927328	6398766	2574.3	2400	605789.6	386230.7	1.0007	23.24	23.31	22-Jun-17	18:28:01	H5-17-WDM-0391	1
89	PCB-122		836985.3	1.606	NO	23.48	50	17.212	1.138		100				3856	2666	8878567	5570830	2302.3	2089.4	515822.4	321162.9	0.9958	23.44	23.51	22-Jun-17	18:28:01	H5-17-WDM-0391	1
90	PCB-114		934086	1.599	NO	23.57	53.45983	16.079		1.255	106.9				3856	2666	9240077	5891324	2396.1	2209.6	574683.3	359402.7	1	23.54	23.61	22-Jun-17	18:28:01	H5-17-WDM-0391	1
91	PCB-105		923123.9	1.579	NO	23.94	53.34628	16.693		1.193	106.7				3856	2666	9434601	5954658	2446.5	2233.4	565184	357939.9	1.0007	23.9	23.97	22-Jun-17	18:28:01	H5-17-WDM-0391	1
92	PCB-127		947419.1	1.596	NO	24.64	50	16.017	1.288		100				3856	2666	9329727	5861895	2419.3	2198.6	582487.8	364931.4	1.0302	24.61	24.68	22-Jun-17	18:28:01	H5-17-WDM-0391	1
93	PCB-126		886163	1.576	NO	25.51	53.2808	15.54		1.253	106.6				3856	2666	8424474	5415618	2184.6	2031.2	542114.7	344048.3	1	25.48	25.55	22-Jun-17	18:28:01	H5-17-WDM-0391	1
94	* PCB-155		823058.2	1.275	NO	20.52	54.0417	17.292		1.067	108.1				407	719	7975585	6324783	19589.9	8801.4	461233.9	361824.3	1.0008	20.49	20.56	22-Jun-17	18:28:01	H5-17-WDM-0391	1
95	PCB-152		725879.5	1.255	NO	20.69	50	17.78	1.151		100				407	719	7183069	5670436	17643.3	7890.8	403996.2	321883.3	1.0088	20.65	20.72	22-Jun-17	18:28:01	H5-17-WDM-0391	1
96	PCB-150		775655	1.273	NO	20.75	50	17.766	1.23		100				407	719	7716931	6143767	18954.5	8549.5	434356.6	341298.4	1.012	20.72	20.79	22-Jun-17	18:28:01	H5-17-WDM-0391	1
97	PCB-136		702514.8	1.275	NO	20.98	50	17.62	1.114		100				407	719	6938036	5412677	17041.4	7532.1	393766.3	308748.5	1.0231	20.95	21.01	22-Jun-17	18:28:01	H5-17-WDM-0391	1
98	PCB-145		698909	1.266	NO	21.13	50	17.144	1.109		100				407	719	6694803	5203658	16444	7241.2	390512.2	308396.8	1.0303	21.09	21.16	22-Jun-17	18:28:01	H5-17-WDM-0391	1
99	PCB-148		567996.6	1.263	NO	21.85	50	17.02	0.901		100				407	719	5395021	4309810	13251.4	5997.4	316982.4	251014.2	1.0653	21.81	21.88	22-Jun-17	0.769456	H5-17-WDM-0391	1
100	PCB-151/135		1107528.6	1.263	NO	22.21	100	13.007	0.878		100				407	719	8040506	6348498	19749.3	8834.4	618189.6	489339	1.0829	22.17	22.24	22-Jun-17	0.769456	H5-17-WDM-0391	1
101	PCB-154		631484.3	1.287	NO	22.3	50	15.916	1.002		100				407	719	5655443	4439084	13891.1	6177.3	355322.3	276162	1.0876	22.27	22.34	22-Jun-17	0.769456	H5-17-WDM-0391	1
102	PCB-144		562740.7	1.27	NO	22.48	50	17.352	0.893		100	23-Jun-17	ES170623MB		407	719	5461916	4329376	13415.7	6024.6	314777.4	247963.3	1.0964	22.45	22.52	22-Jun-17	0.769456	H5-17-WDM-0391	1
103	* PCB-147/149		1274360.4	1.274	NO	22.69	100	17.539	1.011		100				2362	3021	12520317	9804576	5300	3246	713849.7	560510.7	1.1063	22.65	22.72	22-Jun-17	18:28:01	H5-17-WDM-0391	1
104	PCB-134/143		1162385.8	1.263	NO	22.83	100	12.053	0.922		100				2362	3021	7820512	6213867	3310.5	2057.2	648820	513565.8	1.1135	22.8	22.87	22-Jun-17	18:28:01	H5-17-WDM-0391	1
105	PCB-139/140		1281266.8	1.262	NO	23	100	16.61	1.016		100				2362	3021	11872706	9381051	5025.9	3105.8	714788.1	566478.7	1.1215	22.97	23.03	22-Jun-17	18:28:01	H5-17-WDM-0391	1
106	PCB-131		602621.8	1.284	NO	23.13	50	17.042	0.956		100				2362	3021	5773871	4466484	2444.2	1478.7	338794.7	263827.1	0.8756	23.1	23.16	22-Jun-17	18:28:01	H5-17-WDM-0391	1
107	PCB-142		556043.5	1.263	NO	23.21	50	16.948	0.882		100				2362	3021	5258667	4216934	2226.1	1396.1	310280.2	245763.3	0.8787	23.18	23.25	22-Jun-17	18:28:01	H5-17-WDM-0391	1
108	PCB-132		608819.1	1.288	NO	23.38	50	17.537	0.966		100				2362	3021	6011225	4643650	2544.6	1537.4	342771.4	266047.6	0.8849	23.34	23.41	22-Jun-17	18:28:01	H5-17-WDM-0391	1
109	PCB-133		602104.2	1.256	NO	23.57	50	16.69	0.955		100				2362	3021	5595197	4468119	2368.5	1479.2	335243.6	266860.6	0.8924	23.54	23.61	22-Jun-17	18:28:01	H5-17-WDM-0391	1
110	PCB-165		769119.9	1.258	NO	23.77	50	17.074	1.22		100				2362	3021	7315481	5856520	3096.7	1938.9	428463	340656.9	0.8999	23.74	23.8	22-Jun-17	18:28:01	H5-17-WDM-0391	1
111	PCB-146		662141.8	1.235	NO	23.9	50	18.334	1.05		100				2362	3021	6707252	5426911	2839.3	1796.7	365832.8	296309	0.9049	23.87	23.94	22-Jun-17	18:28:01	H5-17-WDM-0391	1
112	PCB-161		822751.5	1.276	NO	23.98	50	16.071	1.305		100				2362	3021	7413128	5758568	3138.1	1906.5	461270.4	361481.1	0.908	23.95	24.02	22-Jun-17	18:28:01	H5-17-WDM-0391	1
113	PCB-153/168		1533547.1	1.253	NO	24.23	100	15.196	1.216		100				2362	3021	12960329	10416927	5486.3	3448.7	852858.9	680688.1	0.9173	24.2	24.26	22-Jun-17	18:28:01	H5-17-WDM-0391	1
114	PCB-141		548667.2	1.271	NO	24.35	50	17.2	0.87		100				2362	3021	5281002	4176074	2235.5	1382.6	307031.2	241636	0.9216	24.31	24.38	22-Jun-17	18:28:01	H5-17-WDM-0391	1
115	PCB-130		528502.6	1.254	NO	24.58	50	17.445	0.838		100				2362	3021	5129536	4070847	2171.4	1347.7	294045.8	234456.8	0.9303	24.54	24.61	22-Jun-17	18:28:01	H5-17-WDM-0391	1
116	PCB-137/164		1347654.8	1.274	NO	24.74	100	9.764	1.069		100	23-Jun-17	ES170623MJ		2362	3021	7372615	5763718	3120.9	1908.2	755097.9	592556.9	0.9366	24.71	24.77	22-Jun-17	18:28:01	H5-17-WDM-0391	1
117	PCB-138/163/129		1904249	1.263	NO	24.9	150	13.698	1.007		100				2362	3021	14555692	11550929	6161.6	3824.1	1062596	841653	0.9428	24.87	24.94	22-Jun-17	18:28:01	H5-17-WDM-0391	1
118	PCB-160		883161.9	1.272	NO	25	50	16.24	1.401		100				2362	3021	8030270	6341730	3399.3	2099.5	494476.2	388685.7	0.9465	24.97	25.04	22-Jun-17	18:28:01	H5-17-WDM-0391	1
119	PCB-158		828660	1.259	NO	25.1	50	16.557	1.314		100				2362	3021	7647993	6148427	3237.5	2035.5	461906.3	366753.7	0.9502	25.07	25.14	22-Jun-17	18:28:01	H5-17-WDM-0391	1
120	PCB-128/166		1408023.3	1.267	NO	25.58	100	14.481	1.117		100				2362	3021	11397308	9046726	4824.6	2995.1	787043.5	620979.8	0.9683	25.54	25.61	22-Jun-17	18:28:01	H5-17-WDM-0391	1
121	PCB-159		831996	1.225	NO	26.04	50	17.042	1.32		100				2362	3021	7806663	6298370	3304.7	2085.2	458071.3	373924.7	0.9857	26	26.07	22-Jun-17	18:28:01	H5-17-WDM-0391	1
122	PCB-162		813939.9	1.237	NO	26.19	50	17.472	1.291		100	23-Jun-17	ES170623MB		2362	3021	7865080	6286575	3329.4	2081.3	450164.2	363775.7	0.9913	26.15	26.22	22-Jun-17	18:28:01	H5-17-WDM-0391	1
123	PCB-167		802416.4	1.247	NO	26.43	47.85415	16.771		1.401	95.7				2362	3021	7469314	5925251	3161.9	1961.7	445361.5	357054.9	1.0006	26.4	26.47	22-Jun-17	18:28:01	H5-17-WDM-0391	1
124	PCB-156/157		1591001.4	1.275	NO	27.07	95.23372	13.222		1.36	95.2				2362	3021	11788238	9250956	4990.1	3062.7	891530.3	699471.1	1.0006	27.04	27.11	22-Jun-17	18:28:01	H5-17-WDM-0391	1
125	PCB-169		745365.2	1.297	NO	28.72	48.07524	15.863		1.302	96.2				2362	3021	6675833	5240881	2826	1735.1	420845.2	324520	1	28.68	28.75	22-Jun-17	18:28:01	H5-17-WDM-0391	1
126	* PCB-188		717436.3	0.928	NO	23.54	43.44542	16.921		0.85	86.9				1661	1188	5841868	6241208	3518	5254.9	345249.3	372187	1.0007	23.51	23.57	22-Jun-17	18:28:01	H5-17-WDM-0391	1
127	PCB-179		678298.2	0.921	NO	23.74	50	16.728	0.917		100				1661	1188	5438989	5929195	3275.4	4992.2	325138.8	353159.3	1.0091	23.7	23.77	22-Jun-17	18:28:01	H5-17-WDM-0391	1
128	PCB-184		758580.3	0.947	NO	23.98	50	17.401	1.026		100				1661	1188	6419885	6774907	3866.1	5704.3	368941.9	389638.4	1.0196	23.95	24.02	22-Jun-17	18:28:01	H5-17-WDM-0391	1
129	PCB-176		697634.9	0.924	NO	24.2	50	17.318	0.943		100				1661	1188	5803825	6290394	3495.1	5296.3	335126.4	362508.5	1.0286	24.16	24.23	22-Jun-17	18:28:01	H5-17-WDM-0391	1
130	PCB-186		665262.7	0.918	NO	24.46	50	17.072	0.899		100				1661	1188	5435677	5852532	3273.4	4927.6	318389.8	346872.8	1.0398	24.43	24.49	22-Jun-17	18:28:01	H5-17-WDM-0391	1
131	PCB-178		509621.3	0.932	NO	25.1	50	16.836	0.689		100				1661	1188	4139828	4460168	2493	3755.3	245893.4	263727.9	1.067	25.07	25.14	22-Jun-17	18:28:01	H5-17-WDM-0391	1
132	PCB-175		540721.4	0.932	NO	25.43	50	16.631	0.731		100				1661	1188	4338639	4691012	2612.7	3949.7	260884.1	279837.3	1.081	25.4	25.46	22-Jun-17	18:28:01	H5-17-WDM-0391	1
133	PCB-187		634281.7	0.938	NO	25.58	50	17.428	0.858		100				1661	1188	5349787	5711685	3221.6	4809.1	306958.5	327323.2	1.0873	25.54	25.61	22-Jun-17	18:28:01	H5-17-WDM-0391	1
134	PCB-182		520312.8	0.93	NO	25.68	50	17.232	0.703		100				1661	1188	4321469	4645765	2602.4	3911.6	250775.9	269536.8	1.0915	25.64	25.71	22-Jun-17	18:28:01	H5-17-WDM-0391	1
135	PCB-183		579095	0.924	NO	25.89	50	16.369	0.783		100				1661	1188	4553180	4919613	2741.9	4142.2	278164.8	300930.3	1.1006	25.86	25.92	22-Jun-17	18:28:01	H5-17-WDM-0391	1
136	PCB-185		461282.5	0.925	NO	25.97	50	19.246	0.624		100				1661	1188	4265264	4612867	2568.5	3883.9	221621.6	239661	1.1041	25.94	26.01	22-Jun-17	18:28:01	H5-17-WDM-0391	1
137	PCB-174		501670	0.93	NO	26.04	50	16.109	0.678		100				1661	1188	3894883	4246867	2345.5	3575.7	241780.4	259889.5	1.1068	26	26.07	22-Jun-17	18:28:01	H5-17-WDM-0391	1
138	PCB-177		491631	0.917	NO	26.28	50	15.921	0.665		100				1661	1188	3744449	4071988	2254.9	3428.5	235187.8	256443.2	1.1173	26.25	26.32	22-Jun-17	18:28:01	H5-17-WDM-0391	1
139	PCB-181		525700.7	0.924	NO	26.48	50	17.093	0.711		100				1661	1188	4316155	4647898	2599.2	3913.4	252513	273187.7	0.8828	26.45	26.52	22-Jun-17	18:28:01	H5-17-WDM-0391	1
140	PCB-171/173		938152.5	0.93	NO	26.61	100	16.742	0.634		100				1661	1188	7568762	8027326	4557.9	6758.7	452078.7	486073.8	0.8872	26.58	26.65	22-Jun-17	18:28:01	H5-17-WDM-0391	1
141	PCB-172		500435.2	0.933	NO	27.4	50	16.507	0.677		100				1661	1188	3986628	4249453	2400.7	3577.9	241506.7	258928.5	0.9135	27.37	27.44	22-Jun-17	18:28:01	H5-17-WDM-0391	1
142	PCB-192		595867.8	0.933	NO	27.55	50	17.256	0.806		100				1661	1188	4961556	5329124	2987.8	4487	287522.3	308345.5	0.9184	27.52	27.58	22-Jun-17	18:28:01	H5-17-WDM-0391	1
143	PCB-180/193		1149587.6	0.929	NO	27.71	100	13.149	0.777		100				1661	1188	7278132	7898842	4382.9	6650.6	553505.3	596082.4	0.9239	27.68	27.75	22-Jun-17	18:28:01	H5-17-WDM-0391	1
144	PCB-191		653975.3	0.928	NO	27.93	50	17.174	0.884		100				1661	1188	5404730	5821429	3254.7	4901.5	314711.6	339263.7	0.931	27.89	27.96	22-Jun-17	18:28:01	H5-17-WDM-0391	1
145	PCB-170		471230.5	0.93	NO	28.42	50	16.524	0.637		100				1661	1188	3753054	4052169	2260.1	3411.8	227131.2	244099.3	0.9474	28.39	28.45	22-Jun-17	18:28:01	H5-17-WDM-0391	1
146	PCB-190		698685.2	0.921	NO	28.7	50	15.535	0.945		100				1661	1188	5203256	5602500	3133.4	4717.1	334942.3	363742.9	0.9567	28.67	28.73	22-Jun-17	18:28:01	H5-17-WDM-0391	1
147	* PCB-189		680329.7	1.057	NO	30.01	56.80561	17.143		1.179	113.6				2860	2414	5994061	5636945	2096	2335.5	349642.1	330687.6	1.0005	29.98	30.05	22-Jun-17	18:28:01	H5-17-WDM-0391	1
148	* PCB-202		1194086.8	0.891	NO	26.32	76.4072	17.021		1.025	101.9				860	797	9576442	10683390	11135.8	13400.2	562629.7	631457.1	1.0006	26.28	26.35	22-Jun-17	18:28:01	H5-17-WDM-0391	1
149	PCB-201		1115681	0.907	NO	26.79	75	16.891	1.194		100				860	797	8961524	9822708	10420.8	12320.7	530535.3	585145.8	1.0187	26.76	26.83	22-Jun-17	18:28:01	H5-17-WDM-0391	1
150	PCB-204		1208073.3	0.905	NO	27.14	75	16.868	1.293		100				860	797	9681975	10622478	11258.5	13323.8	573979	634094.3	1.0319	27.11	27.17	22-Jun-17	0.769456	H5-17-WDM-0391	1
151	PCB-197		1197443.7	0.892	NO	27.25	75	16.628	1.282		100				860	797	9386214	10466533	10914.6	13128.2	564466.9	632976.8	1.0362	27.22	27.29	22-Jun-17	0.769456	H5-17-WDM-0391	1
152	PCB-200		1078638.3	0.911	NO	27.34	75	17.07	1.155		100				860	797	8779799	9758001	10209.4	12239.5	514349.4	564288.9	1.0394	27.3	27.37	22-Jun-17	0.769456	H5-17-WDM-0391	1
153	PCB-198/199		1642418.2	0.889	NO	28.73	150	14.537	0.879		100				860	797	11239061	12611140	13069.2	15818.2	773112.8	869305.4	0.9146	28.7	28.77	22-Jun-17	0.769456	H5-17-WDM-0391	1
154	PCB-196		804001.2	0.896	NO	29.09	75	16.523	0.861		100				860	797	6278283	6984163	7300.6	8760.3	379961.8	424039.4	0.9261	29.06	29.13	22-Jun-17	18:28:01	H5-17-WDM-0391	1
155	PCB-203		837478.8	0.892	NO	29.19	75	17.243	0.896		100				860	797	6807519	7663774	7916	9612.7	394801.6	442677.2	0.9292	29.16	29.23	22-Jun-17	18:28:01	H5-17-WDM-0391	1
156	* PCB-195		670301.3	0.919	NO	29.92	75	16.871	0.718		100				2343	2357	5414494	5833807	2311.3	2475	320933.6	349367.7	0.9523	29.88	29.95	22-Jun-17	18:28:01	H5-17-WDM-0391	1
157	PCB-194		680021.4	0.911	NO	31.14	75	15.578	0.728		100				2343	2357	5050243	5581987	2155.8	2368.2	324200.3	355821.1	0.9912	31.11	31.17	22-Jun-17	18:28:01	H5-17-WDM-0391	1
158	PCB-205		784335.1	0.916	NO	31.43	71.50019	15.099		1.135	95.3				2343	2357	5662164	6124014	2417	2598.2	374991.3	409343.8	1.0005	31.4	31.47	22-Jun-17	18:28:01	H5-17-WDM-0391	1
159	* PCB-208		683728.6	0.816	NO	29.75	73.61467	17.032		0.86	98.2				933	2052	5231422	6421155	5607.2	3128.5	307153.2	376575.4	1.0005	29.72	29.79	22-Jun-17	18:28:01	H5-17-WDM-0391	1
160	PCB-207		665008.9	0.819	NO	30.24	75	16.6	0.95		100				933	2052	4970306	6008538	5327.3	2927.5	299419.1	365589.8	1.017	30.21	30.28	22-Jun-17	18:28:01	H5-17-WDM-0391	1
161	PCB-206		471452.7	0.818	NO	32.53	73.53221	14.512		0.816	98				933	2052	3078746	3771895	3299.9	1837.8	212156.6	259296	1.0005	32.49	32.56	22-Jun-17	18:28:01	H5-17-WDM-0391	1
162	* PCB-209		605328.7	1.237	NO	33.67	97.93818	12.981		1.061	130.6				263	282	4344550	3547523	16494.8	12574.8	334681.8	270646.9	1.0005	33.63	33.7	22-Jun-17	18:28:01	H5-17-WDM-0391	1
163	13C-PCB-31		2021573.6	1.092	NO	15.79	104.406	17.768		1.138	104.4				20448	4924	18745084	17283458	916.7	3509.8	1054992	966581.9	0.8678	15.76	15.82	22-Jun-17	18:28:01	H5-17-WDM-0391	1
164	13C-PCB-95		1128113.3	1.586	NO	19.12	88.36768	17.827		0.868	88.4				608	737	12334086	7777496	20291.6	10546.6	691868.7	436244.6	1.0922	19.09	19.15	22-Jun-17	18:28:01	H5-17-WDM-0391	1
165	13C-PCB-153		1207117.6	1.291	NO	24.21	109.4148	17.066		0.875	109.4				1412	978	11607500	8997123	8218.8	9199.4	680171.3	526946.4	1.1808	24.18	24.25	22-Jun-17	18:28:01	H5-17-WDM-0391	1
166	13C-PCB-28		2110033.1	1.081	NO	15.97	98.8323	17.751		1.301	98.8				20448	4924	19455812	17943754	951.5	3643.9	1096033	1014001	0.9417	15.94	16.01	22-Jun-17	18:28:01	H5-17-WDM-0391	1
167	13C-PCB-111		1586971.1	1.59	NO	22.04	102.6463	16.909		1.216	102.6				608	737	16474668	10297953	27103.6	13964.5	974295.6	612675.5	1.0672	22.01	22.08	22-Jun-17	18:28:01	H5-17-WDM-0391	1
168	13C-PCB-178		1368537.1	1.062	NO	25.1	108.8593	16.572		1.206	108.9				1987	1380	11679040	10927409	5876.9	7916.8	704755.2	663781.9	1.0086	25.07	25.14	22-Jun-17	18:28:01	H5-17-WDM-0391	1
169	13C-PCB-1		2841328.3	3.254	NO	8.85	106.4289	19.665		0.901	106.4				1714	8578	42741412	13179390	24930.8	1536.5	2173483	667845.8	0.7473	8.81	8.88	22-Jun-17	18:28:01	H5-17-WDM-0391	1
170	13C-PCB-3		2631600.9	3.251	NO	10.39	99.79135	19.484		0.89	99.8				1714	8578	39212200	12025645	22872.3	1402	2012576	619025.3	0.8778	10.36	10.43	22-Jun-17	18:28:01	H5-17-WDM-0391	1
171	13C-PCB-4		1963278.1	1.638	NO	10.56	103.0466	18.825		0.643	103				6911	2866	22949836	14110647	3321	4922.7	1219103	744175.1	0.8917	10.52	10.59	22-Jun-17	18:28:01	H5-17-WDM-0391	1

172	13C-PCB-15		1899446.4	1.511	NO	14.24	89.90843	17.762		0.713	89.9	10615	2124	20300348	13518921	1912.4	6364.2	1142931	756515.4	1.2028	14.21	14.27	22-Jun-17	18:28:01	H5-17-WDM-0391	1
173	13C-PCB-19		1384903.8	1.047	NO	12.58	83.76224	18.067		0.558	83.8	14973	6392	12798546	12236275	854.8	1914.3	708392.1	676511.6	1.0625	12.55	12.61	22-Jun-17	18:28:01	H5-17-WDM-0391	1
174	13C-PCB-37		2018018.1	1.096	NO	18.2	98.3789	17.558		1.25	98.4	20448	4924	18525742	16955986	906	3443.3	1055093	962925.2	1.0728	18.16	18.23	22-Jun-17	18:28:01	H5-17-WDM-0391	1
175	13C-PCB-54		1870790.1	0.802	NO	14.44	94.60736	18.608		1.205	94.6	960	252	15492841	19351842	16130.4	76836.5	832607.9	1038182	0.8513	14.4	14.47	22-Jun-17	18:28:01	H5-17-WDM-0391	1
176	13C-PCB-81		2209718	0.783	NO	21.8	118.9582	16.924		1.461	119	1297	1570	16426342	20802062	12664.4	13253	970618.1	1239100	1.0554	21.76	21.83	22-Jun-17	18:28:01	H5-17-WDM-0391	1
177	13C-PCB-77		2193924.6	0.774	NO	22.09	114.9605	17.365		1.501	115	1297	1570	16624591	21480922	12817.3	13685.5	957351.2	1236573	1.0696	22.06	22.13	22-Jun-17	18:28:01	H5-17-WDM-0391	1
178	13C-PCB-104		1599048.3	1.57	NO	17.5	102.5002	17.772		1.227	102.5	965	492	17362218	11115205	18001	22605.9	976959.3	622089	1.0321	17.47	17.54	22-Jun-17	18:28:01	H5-17-WDM-0391	1
179	13C-PCB-123		1461836.1	1.762	NO	23.1	120.3935	17.479		0.955	120.4	2620	2251	16300796	9247355	6222.1	4108.3	932584.6	529251.4	1.1183	23.06	23.13	22-Jun-17	18:28:01	H5-17-WDM-0391	1
180	13C-PCB-118		1429880.1	1.698	NO	23.26	120.7974	16.561		0.931	120.8	2620	2251	14902329	8793376	5688.3	3906.6	899867	530013.1	1.1262	23.23	23.3	22-Jun-17	18:28:01	H5-17-WDM-0391	1
181	13C-PCB-114		1392244.6	1.747	NO	23.57	121.6692	17.325		0.9	121.7	2620	2251	15338370	8778950	5854.8	3900.2	885342.3	506902.4	0.9472	23.54	23.61	22-Jun-17	18:28:01	H5-17-WDM-0391	1
182	13C-PCB-105		1450492.3	1.74	NO	23.92	120.9794	17.455		0.943	121	2620	2251	16079963	9228082	6137.8	4099.8	921212.1	529280.3	0.9611	23.89	23.95	22-Jun-17	18:28:01	H5-17-WDM-0391	1
183	13C-PCB-126		1327369.3	1.74	NO	25.51	119.5874	16.739		0.873	119.6	2620	2251	14110826	8148835	5386.2	3620.3	843015.4	484353.8	1.0251	25.48	25.55	22-Jun-17	18:28:01	H5-17-WDM-0391	1
184	13C-PCB-155		1427371.8	1.284	NO	20.51	88.53717	16.969		1.268	88.5	459	592	13616793	10747357	29635.4	18145.4	802434.2	624937.6	0.9929	20.47	20.54	22-Jun-17	18:28:01	H5-17-WDM-0391	1
185	13C-PCB-167		1196856.4	1.276	NO	26.42	104.3772	16.869		1.1	104.4	1412	978	11319073	8910691	8014.6	9111	670997.2	525859.3	1.0614	26.38	26.45	22-Jun-17	18:28:01	H5-17-WDM-0391	1
186	13C-PCB-156/157		2456806.3	1.284	NO	27.06	211.7542	13.474		1.113	105.9	1412	978	18607784	14527715	13175.5	14854.4	1381028	1075778	1.0871	27.02	27.09	22-Jun-17	18:28:01	H5-17-WDM-0391	1
187	13C-PCB-169		1190794.1	1.274	NO	28.72	106.2636	16.83		1.075	108.3	1412	978	11227449	8787387	7949.7	8985	667092.4	523701.6	1.1538	28.68	28.75	22-Jun-17	18:28:01	H5-17-WDM-0391	1
188	13C-PCB-188		1942785.8	1.049	NO	23.52	104.5849	17.241		1.782	104.6	1987	1380	17150562	16250246	8630.1	11773.1	994774.1	947991.7	0.9452	23.49	23.56	22-Jun-17	18:28:01	H5-17-WDM-0391	1
189	13C-PCB-189		1015814.6	1.126	NO	30	103.5574	16.873		0.941	103.6	3073	1987	9077969	8098784	2953.9	4076.2	538031.5	477783.1	0.9639	29.96	30.03	22-Jun-17	18:28:01	H5-17-WDM-0391	1
190	13C-PCB-202		1524676.6	0.941	NO	26.3	101.2901	17.156		1.444	101.3	952	877	12681381	13481428	13319.8	15369.5	739197.1	785479.6	1.0568	26.27	26.33	22-Jun-17	18:28:01	H5-17-WDM-0391	1
191	13C-PCB-205		966492.6	0.958	NO	31.42	106.5507	15.289		1.251	106.6	1911	2185	7230905	7496775	3784.1	3430.9	472937.6	493555	1.0094	31.38	31.45	22-Jun-17	18:28:01	H5-17-WDM-0391	1
192	13C-PCB-208		1079992.9	0.716	NO	29.74	102.865	16.849		1.448	102.9	1993	1795	7593295	10613811	3809.7	5913.6	450676.5	629316.4	0.9555	29.7	29.77	22-Jun-17	18:28:01	H5-17-WDM-0391	1
193	13C-PCB-206		785724.5	0.715	NO	32.51	110.6886	14.435		0.979	110.7	1993	1795	4729200	6554434	2372.7	3651.9	327609.9	458114.6	1.0445	32.48	32.54	22-Jun-17	18:28:01	H5-17-WDM-0391	1
194	13C-PCB-209		582537.5	1.122	NO	33.65	102.0856	13.123		0.787	102.1	236	218	4042488	3563564	17162	16382.4	308049	274488.5	1.0812	33.62	33.69	22-Jun-17	18:28:01	H5-17-WDM-0391	1
195	13C-PCB-9		2963037.3	1.619	NO	11.84	100	18.379	29630.37		100	6911	2866	33660420	20639578	4870.9	7200.4	1831502	1131536	0.4757	11.81	11.87	22-Jun-17	18:28:01	H5-17-WDM-0391	1
196	13C-PCB-52		1641017	0.789	NO	16.96	100	17.164	16410.17		100	1390	676	12422597	15835582	8938.1	23427.6	723768	917249	0.6815	16.93	16.99	22-Jun-17	18:28:01	H5-17-WDM-0391	1
197	13C-PCB-101		1271429.4	1.552	NO	20.65	100	16.893	12714.29		100	608	737	13062933	8374686	21490.7	11356.5	773284.2	498145.2	0.8299	20.62	20.69	22-Jun-17	18:28:01	H5-17-WDM-0391	1
198	13C-PCB-138		1042422.4	1.282	NO	24.89	100	17.276	10424.22		100	1412	978	10115875	7918418	7162.7	8096.5	585545.9	456876.5	0	24.85	24.92	22-Jun-17	18:28:01	H5-17-WDM-0391	1
199	13C-PCB-194		725078.1	0.952	NO	31.12	100	15.269	7250.781		100	1911	2185	5400343	5752694	2826.1	2632.7	353682.3	371395.7	1.2505	31.09	31.16	22-Jun-17	18:28:01	H5-17-WDM-0391	1
200	Total MoCB-F1	10					114829.2		16.495			1260		30321541				1559650					22-Jun-17	18:28:01	H5-17-WDM-0391	1
201	Total DiCB-F1	8					16656.67		4.494			2873		48495551				2557542					22-Jun-17	0.769456	H5-17-WDM-0391	1
202	Total DiCB-F2	6					23708.08		10.376			1755		34867957				2076583					22-Jun-17	0.769456	H5-17-WDM-0391	1
203	Total TrCB-F1	1					26.00346					629		3469418				193338					22-Jun-17	0.769456	H5-17-WDM-0391	1
204	Total TrCB-F2	6					175		0.92			333		23896976				1384628					22-Jun-17	0.769456	H5-17-WDM-0391	1
205	Total TrCB-F3	18					148292.6		2.882			1444		62358258				3758723					22-Jun-17	18:28:01	H5-17-WDM-0391	1
206	Total TeCB-F2	1					54.64366					442		8399714				449439.8					22-Jun-17	18:28:01	H5-17-WDM-0391	1
207	Total TeCB-F3	13					1100		0.711			907		1.06E+08				6634771					22-Jun-17	18:28:01	H5-17-WDM-0391	1
208	Total TeCB-F4	18					118768.9		6.122			1		1.14E+08				7196457					22-Jun-17	18:28:01	H5-17-WDM-0391	1
209	Total PeCB-F3	2					99.56709		27.874			504		18674542				1046046					22-Jun-17	18:28:01	H5-17-WDM-0391	1
210	Total PeCB-F4	18					8199.622		0.945			658708		1.68E+08				14234550					22-Jun-17	18:28:01	H5-17-WDM-0391	1
211	Total PeCB-F5	31					602227.2		33.198			3856		1.06E+08				6396533					22-Jun-17	18:28:01	H5-17-WDM-0391	1
212	Total HxCB-F4	9					504.0417		7.327			407		61061310				3689137					22-Jun-17	18:28:01	H5-17-WDM-0391	1
213	Total HxCB-F5	38					341920.5		12.212			2362		1.94E+08				12525113					22-Jun-17	18:28:01	H5-17-WDM-0391	1
214	Total HpCB-F5	29					186557.4		2.501			1661		1.07E+08				6463084					22-Jun-17	18:28:01	H5-17-WDM-0391	1
215	Total HpCB-F6	1					56.80561					2860		7173571				420803.7					22-Jun-17	18:28:01	H5-17-WDM-0391	1
216	Total OcCB-F5	12					1808.532		10.735			860		70719913				4294582					22-Jun-17	18:28:01	H5-17-WDM-0391	1
217	Total OcCB-F6	6					217856.2		27.533			2343		16869810				1072669					22-Jun-17	18:28:01	H5-17-WDM-0391	1
218	Total NoCB-F6	3					222.1469		41.42			933		13280474				818728.9					22-Jun-17	18:28:01	H5-17-WDM-0391	1
219	Total DeCB-F7	1					97.93818					263		4344550				334681.8					22-Jun-17	18:28:01	H5-17-WDM-0391	1
220	Total 13C-MoCB-F1	2					206.2202					1714		82071795				4192706					22-Jun-17	18:28:01	H5-17-WDM-0391	1
221	Total 13C-DiCB-F1	6					204.5107		14848.32			6911		56846799				3067981					22-Jun-17	18:28:01	H5-17-WDM-0391	1
222	Total 13C-DiCB-F2	1					89.90843					10615		20300348				1142931					22-Jun-17	18:28:01	H5-17-WDM-0391	1
223	Total 13C-TrCB-F1	1					83.76224					14973		20325941				1138263					22-Jun-17	18:28:01	H5-17-WDM-0391	1
224	Total 13C-TrCB-F3	3					301.6172					20448		57572337				3256037					22-Jun-17	18:28:01	H5-17-WDM-0391	1
225	Total 13C-TeCB-F2	1					94.60736					960		15492841				832607.9					22-Jun-17	18:28:01	H5-17-WDM-0391	1
226	Total 13C-TeCB-F3	5					102.969		16410.17			1390		12793806				745611.7					22-Jun-17	18:28:01	H5-17-WDM-0391	1
227	Total 13C-TeCB-F4	2					233.9187					1297		33871552				1975817					22-Jun-17	18:28:01	H5-17-WDM-0391	1
228	Total 13C-PeCB-F3	1					102.5002					965		17370920				977455.6					22-Jun-17	18:28:01	H5-17-WDM-0391	1
229	Total 13C-PeCB-F4	10					294.6923		4305.272			608		42039376				2449217					22-Jun-17	18:28:01	H5-17-WDM-0391	1
230	Total 13C-PeCB-F5	5					603.427					2620		78085887				4571518					22-Jun-17	18:28:01	H5-17-WDM-0391	1
231	Total 13C-HxCB-F4	1					88.53717					459		13704881				807725.5					22-Jun-17	18:28:01	H5-17-WDM-0391	1
232	Total 13C-HxCB-F5	15					657.9481		2196.939			1412		63404944				4017398					22-Jun-17	18:28:01	H5-17-WDM-0391	1
233	Total 13C-HpCB-F5	2					213.4442					1987		29498100				1740848					22-Jun-17	18:28:01	H5-17-WDM-0391	1
234	Total 13C-HpCB-F6	1					103.5574					3073		9739053				581060.7					22-Jun-17	18:28:01	H5-17-WDM-0391	1
235	Total 13C-OcCB-F5	1					101.2901					952		12862034				750639.5					22-Jun-17	18:28:01	H5-17-WDM-0391	1
236	Total 13C-OcCB-F6	6					226.159		3692.038			1911		13092767				861074.4					22-Jun-17	18:28:01	H5-17-WDM-0391	1
237	Total 13C-NoCB-F6	2					213.5536					1993		12399284				783073.8					22-Jun-17	18:28:01	H5-17-WDM-0391	1
238	Total 13C-DeCB-F7	1					102.0856					236		4042488				308049					22-Jun-17	18:28:01	H5-17-WDM-0391	1
239	Lockmass F1											2880040		0				0					22-Jun-17	18:28:01	H5-17-WDM-0391	1
240	Lockmass F2											1768543		0				0					22-Jun-17	18:28:01	H5-17-WDM-0391	1
241	Lockmass F3											3792876		0				0					22-Jun-17	18:28:01	H5-17-WDM-0391	1
242	Lockmass F4											4869220		0				0					22-Jun-17	18:28:01	H5-17-WDM-0391	1
243	Lockmass F5											817453		0				0					22-Jun-17	18:28:01	H5-17-WDM-0391	1
244	Lockmass F6											565635		0				0					22-Jun-17	18:28:01	H5-17-WDM-0391	1
245	Lockmass F7											386722		0				0					22-Jun-17	18:28:01	H5-17-WDM-0391	1

Sample Name: 5-170624A02   Sample ID: H5-17-WDM-0396

	Target Analyte	#Hom	Resp	Ra	Ra fail=YES	RT	Conc.	H/A	ical RRF	User RF	%Rec	Mod.Date	Mod.Comment	Code Comments	Noise 1	Noise 2	Ion1 Ht	Ion2 Ht	Ion1 s/n	Ion2 s/n	Ion1 Area	Ion2 Area	RRT	RT LCL	RT UCL	Acq.Date	Acq.Time	ID	Spl Size
1	* PCB-1		876857.2	3.393	NO	8.85	26.12779	19.829		0.874	104.5				1234	1146	13429224	3975118	10886.1	3467.7	677244.1	199613.1	1	8.81	8.88	24-Jun-17	3:13:48	H5-17-WDM-0396	1
2	PCB-2		813849.2	3.309	NO	10.26	25	19.255	0.881		100				1234	1146	12034167	3623789	9755.2	3161.2	624987	188862.2	0.9889	10.23	10.3	24-Jun-17	3:13:48	H5-17-WDM-0396	1
3	PCB-3		837570	3.373	NO	10.38	26.40013	19.211		0.894	105.6				1234	1146	12411064	3711226	10060.7	3237.5	646051.6	191518.4	1	10.34	10.41	24-Jun-17	3:13:48	H5-17-WDM-0396	1
4	*PCB-4		609241.4	1.317	NO	10.56	24.8017	19.589		0.901	99.2				1200	1085	6782750	5142530	5654.6	4738.9	346250.8	262990.7	1.0016	10.52	10.59	24-Jun-17	3:13:48	H5-17-WDM-0396	1
5	PCB-10		891357.3	1.339	NO	10.67	25	19.005	1.238		100				1200	1085	9697273	7199938	8084.3	6634.8	510261.5	381095.8	1.0125	10.64	10.71	24-Jun-17	3:13:48	H5-17-WDM-0396	1
6	PCB-9		900841	1.347	NO	11.82	25	19.267	1.251		100				1200	1085	9961654	7403654	8304.7	6822.5	517041.8	383799.3	1.1216	11.79	11.86	24-Jun-17	3:13:48	H5-17-WDM-0396	1
7	PCB-7		893943.6	1.341	NO	11.92	25	18.302	1.242		100				1200	1085	9372181	7071883	7813.3	6516.8	512080.6	381863	1.131	11.89	11.96	24-Jun-17	3:13:48	H5-17-WDM-0396	1
8	PCB-6		924779.6	1.342	NO	12.09	25	19.104	1.285		100				1200	1085	10124813	7532422	8440.8	6941.2	529995.1	394784.5	1.1466	12.05	12.12	24-Jun-17	3:13:48	H5-17-WDM-0396	1
9	PCB-5		782324.2	1.345	NO	12.28	25	20.186	1.087		100				1200	1085	9056747	6701679	7550.3	6175.7	448671.2	333653	1.1653	12.25	12.32	24-Jun-17	3:13:48	H5-17-WDM-0396	1
10	PCB-8		988474.3	1.362	NO	12.37	25	17.493	1.373		100				1200	1085	9971531	7304367	8313	6731	570027.6	418446.7	1.1731	12.33	12.4	24-Jun-17	3:13:48	H5-17-WDM-0396	1
11	* PCB-14		900990.5	1.535	NO	13.34	25	18.784	1.252		100				805	1815	10247558	6699693	12737.5	3691.4	545543.6	355446.9	0.9378	13.31	13.37	24-Jun-17	3:13:48	H5-17-WDM-0396	1
12	PCB-11		856169.4	1.531	NO	13.86	25	17.368	1.189		100				805	1815	8995305	5819531	11181	3206.4	517915.6	338253.8	0.9747	13.83	13.9	24-Jun-17	3:13:48	H5-17-WDM-0396	1
13	PCB-13/12		1677682.4	1.579	NO	14.05	50	14.175	1.165		100				805	1815	14559954	9254952	18097.8	5099.2	1027169	650513.9	0.9873	14.01	14.08	24-Jun-17	3:13:48	H5-17-WDM-0396	1
14	PCB-15		922135.1	1.558	NO	14.24	25.25537	18.005		1.204	101				805	1815	10113191	6437646	12570.5	3547	561680.2	360454.9	1.0011	14.21	14.27	24-Jun-17	3:13:48	H5-17-WDM-0396	1
15	* PCB-19		557388.8	1.053	NO	12.56	24.80299	18.986		1.03	99.2				840	739	5427551	5157066	6463.2	6980	285867.3	271521.5	1.0013	12.53	12.6	24-Jun-17	3:13:48	H5-17-WDM-0396	1
16	* PCB-30/18		1022853.7	1.043	NO	13.65	50	14.09	0.807		100				416	632	7356590	7129901	17691.2	11289.3	522117.4	500736.2	1.0881	13.62	13.69	24-Jun-17	3:13:48	H5-17-WDM-0396	1
17	PCB-17		409923.5	1.036	NO	13.93	25	18.332	0.647		100				416	632	3824269	3695741	9196.6	5851.7	208611.7	201311.9	1.1103	13.9	13.96	24-Jun-17	3:13:48	H5-17-WDM-0396	1
18	PCB-27		626359.9	1.046	NO	14.06	25	17.926	0.988		100				416	632	5739085	5475051	13801.4	8669.1	320151.4	306208.5	1.1207	14.03	14.09	24-Jun-17	3:13:48	H5-17-WDM-0396	1
19	PCB-24		601325	1.027	NO	14.14	25	18.49	0.949		100				416	632	5634323	5450573	13549.5	8630.3	304726.3	296598.7	1.1272	14.11	14.18	24-Jun-17	3:13:48	H5-17-WDM-0396	1
20	PCB-16		368574.3	1.063	NO	14.21	25	17.558	0.582		100				416	632	3334693	3185268	8019.3	5043.5	189919.6	178654.7	1.1325	14.18	14.24	24-Jun-17	3:13:48	H5-17-WDM-0396	1
21	PCB-32		676876.3	1.057	NO	14.5	25	18.063	1.068		100				416	632	6283245	5948854	15110	9419.3	347851.1	329025.3	1.156	14.47	14.54	24-Jun-17	3:13:48	H5-17-WDM-0396	1
22	* PCB-34		703900.3	0.966	NO	15.2	25	18.312	1.111		100				757	1557	6333021	6564450	8367.1	4216.9	345847.2	358053.2	0.836	15.17	15.23	24-Jun-17	3:13:48	H5-17-WDM-0396	1
23	PCB-23		734197.4	0.977	NO	15.3	25	18.279	1.159		100				757	1557	6633236	6792702	8763.7	4363.5	362894.2	371303.3	0.8414	15.26	15.33	24-Jun-17	3:13:48	H5-17-WDM-0396	1
24	PCB-29/26		1246092.4	0.966	NO	15.48	50	16.625	0.983		100				757	1557	10180077	10494197	13449.7	6741.2	612346.4	633745.9	0.8514	15.45	15.51	24-Jun-17	3:13:48	H5-17-WDM-0396	1
25	PCB-25		807233.2	0.965	NO	15.61	25	16.629	1.274		100				757	1557	6590288	6796546	8707	4366	396318.1	410915.1	0.8587	15.58	15.64	24-Jun-17	3:13:48	H5-17-WDM-0396	1
26	PCB-31		748537.7	0.969	NO	15.79	25	18.059	1.181		100	26-Jun-17	RS170626MB		757	1557	6651520	6838681	8787.9	4393	368320.1	380217.6	0.8686	15.76	15.82	24-Jun-17	3:13:48	H5-17-WDM-0396	1
27	PCB-28/20		1372097.9	0.963	NO	15.97	50	15.431	1.083		100				757	1557	10387216	10637984	13723.4	6833.6	673139.8	698958.1	0.8786	15.94	16.01	24-Jun-17	3:13:48	H5-17-WDM-0396	1
28	PCB-21/33		1551821.9	0.973	NO	16.09	50	15.116	1.224		100				757	1557	11566324	11933512	15281.2	7665.8	765153.9	786668	0.8849	16.05	16.12	24-Jun-17	3:13:48	H5-17-WDM-0396	1
29	PCB-22		690396.6	0.966	NO	16.34	25	17.962	1.089		100				757	1557	6091808	6268404	8048.4	4026.7	339157.8	351238.8	0.8985	16.3	16.37	24-Jun-17	3:13:48	H5-17-WDM-0396	1
30	PCB-36		792047.7	0.963	NO	17.16	25	16.632	1.25		100	26-Jun-17	RS170626MB		757	1557	6463196	6683134	8539	4293.1	388596.4	403451.3	0.9438	17.13	17.19	24-Jun-17	3:13:48	H5-17-WDM-0396	1
31	PCB-39		689134.5	0.964	NO	17.37	25	17.232	1.087		100				757	1557	5827801	6014763	7699.6	3863.8	338189.5	350945	0.9556	17.34	17.41	24-Jun-17	3:13:48	H5-17-WDM-0396	1
32	PCB-38		767588.1	0.974	NO	17.7	25	17.728	1.211		100				757	1557	6714821	6902691	8871.5	4434.1	378760	388828.1	0.9737	17.67	17.74	24-Jun-17	3:13:48	H5-17-WDM-0396	1
33	PCB-35		717453.3	0.998	NO	17.97	25	16.468	1.132		100				757	1557	5900883	5968040	7796.1	3833.7	358326.9	359126.4	0.9882	17.93	18	24-Jun-17	3:13:48	H5-17-WDM-0396	1
34	PCB-37		708456.5	0.969	NO	18.2	26.98575	17.368		0.909	107.9				757	1557	6054140	6253911	7998.6	4017.4	348576.6	359879.9	1.0009	18.16	18.23	24-Jun-17	3:13:48	H5-17-WDM-0396	1
35	* PCB-54		1447451.6	0.783	NO	14.42	53.17762	17.96		0.991	106.4				651	562	11417912	14689566	17539.1	26139.3	635754.8	811696.8	1.0011	14.39	14.46	24-Jun-17	3:13:48	H5-17-WDM-0396	1
36	* PCB-50/53		1877773.1	0.668	NO	15.64	100	18.016	0.652		100				850	1202	13545003	20182934	15930.5	16790.4	751820.6	1125953	1.0859	15.61	15.68	24-Jun-17	3:13:48	H5-17-WDM-0396	1
37	PCB-45/51		1807071.4	0.662	NO	16.06	100	14.511	0.628		100				850	1202	10446299	15659361	12286	13027.2	719877.1	1087194	1.1145	16.02	16.09	24-Jun-17	3:13:48	H5-17-WDM-0396	1
38	PCB-46		733924.5	0.663	NO	16.22	50	18.123	0.51		100				850	1202	5304400	7918916	6238.6	6587.8	292687.6	441236.9	1.1259	16.19	16.25	24-Jun-17	3:13:48	H5-17-WDM-0396	1
39	PCB-52		984485.6	0.661	NO	16.96	50	17.644	0.684		100				850	1202	6911832	10273980	8129.1	8547.1	391737.3	592748.3	1.1774	16.93	16.99	24-Jun-17	3:13:48	H5-17-WDM-0396	1
40	PCB-73		1162451.9	0.673	NO	17.03	50	19.43	0.808		100	26-Jun-17			850	1202	9086565	13562520	10686.8	11282.8	467647.5	694804.4	1.182	16.99	17.06	24-Jun-17	3:13:48	H5-17-WDM-0396	1
41	PCB-43		896211.4	0.676	NO	17.09	50	16.502	0.623		100	26-Jun-17			850	1202	5966023	8973401	7016.7	7465.1	361532.9	534678.5	1.1865	17.06	17.13	24-Jun-17	3:13:48	H5-17-WDM-0396	1
42	PCB-69/49		2226138.8	0.668	NO	17.21	100	12.886	0.773		100				850	1202	11488719	17175356	13512.1	14288.4	891533.9	1334605	1.1946	17.17	17.24	24-Jun-17	3:13:48	H5-17-WDM-0396	1
43	PCB-48		915339.3	0.669	NO	17.39	50	17.923	0.636		100				850	1202	6573647	9880879	7731.4	8220	366771.7	548567.6	1.2071	17.36	17.42	24-Jun-17	3:13:48	H5-17-WDM-0396	1
44	PCB-44/47/65		2984050.5	0.667	NO	17.54	150	17.017	0.691		100				850	1202	20322690	30257824	23901.8	25171.9	1194231	1789820	1.2174	17.5	17.57	24-Jun-17	3:13:48	H5-17-WDM-0396	1
45	PCB-59/62/75		3708875.4	0.673	NO	17.7	150	17.096	0.859		100				850	1202	25510232	37646856	30003	31318.9	1492178	2216698	1.2289	17.67	17.74	24-Jun-17	3:13:48	H5-17-WDM-0396	1
46	PCB-42		849668	0.668	NO	17.82	50	17.936	0.59		100				850	1202	6104108	9143217	7179.1	7606.4	340332.3	509335.7	1.2369	17.78	17.85	24-Jun-17	3:13:48	H5-17-WDM-0396	1
47	PCB-41/71/40		2744941.9	0.672	NO	18.1	150	11.509	0.636		100				850	1202	12695402	18948098	14931.3	15763.2	1103081	1641861	1.2563	18.06	18.13	24-Jun-17	3:13:48	H5-17-WDM-0396	1
48	PCB-64		1330404.9	0.662	NO	18.21	50	17.374	0.924		100				850	1202	9204525	13832104	10825.6	11507.1	529798.3	800606.6	1.2643	18.18	18.25	24-Jun-17	0.134583	H5-17-WDM-0396	1
49	* PCB-72		1239890.2	0.67	NO	18.61	50	17.947	0.861		100				2962	1	8926973	13373305	3013.8	13373305	497413	742477.3	0.8551	18.58	18.65	24-Jun-17	0.134583	H5-17-WDM-0396	1
50	PCB-68		1436252.9	0.667	NO	18.78	50	17.303	0.998		100				2962	1	9945941	14886309	3357.8	14886309	574817.4	861435.5	0.8626	18.74	18.81	24-Jun-17	0.134583	H5-17-WDM-0396	1
51	PCB-57		1241487.6	0.68	NO	19.02	50	16.872	0.862		100				2962	1	8479669	12480741	2862.8	12480741	502590.5	738897.1	0.8739	18.99	19.05	24-Jun-17	0.134583	H5-17-WDM-0396	1
52	PCB-58		1144219	0.661	NO	19.15	50	17.922	0.795		100				2962	1	8158720	12098613	2754.4	12098613	455247	688972	0.8799	19.12	19.18	24-Jun-17	3:13:48	H5-17-WDM-0396	1
53	PCB-67		1398757.3	0.669	NO	19.23	50	16.657	0.972		100				2962	1	9338389	14038861	3152.7	14038861	560643.4	838113.8	0.8837	19.2	19.27	24-Jun-17	3:13:48	H5-17-WDM-0396	1
54	PCB-63		1298181.7	0.663	NO	19.38	50	17.027	0.902		100				2962	1	8816017	13295351	2976.3	13295351	517765.6	780416.1	0.8904	19.35	19.41	24-Jun-17	3:13:48	H5-17-WDM-0396	1
55	PCB-61/70/74/76		4844312.8	0.67	NO	19.58	200	10.625	0.841		100				2962	1	20653030	30887618	6972.5	30887618	1943871	2900442	0.8994	19.54	19.61	24-Jun-17	3:13:48	H5-17-WDM-0396	1
56	PCB-66		1231489.5	0.666	NO	19.74	50	17.642	0.856		100				2962	1	8685667	13047703	2932.3	13047703	492326.4	739163.1	0.9069	19.71	19.77	24-Jun-17	3:13:48	H5-17-WDM-0396	1
57	PCB-55		1189869	0.67	NO	19.85	50	17.145	0.827		100				2962	1	8185276	12107242	2763.4	12107242	477414	712455	0.9122	19.82	19.89	24-Jun-17	3:13:48	H5-17-WDM-0396	1
58	PCB-56		1263234.1	0.667	NO	20.12	50	17.272	0.878		100				2962	1	8733244	13189113	2948.4	13189113	505633.4	757600.7	0.9242	20.08	20.15	24-Jun-17	3:13:48	H5-17-WDM-0396	1
59	PCB-60		1201277.4	0.66	NO	20.25	50	17.269	0.835		100				2962	1	8251169	12360311	2785.6	12360311	477800.8	723476.6	0.9302	20.21	20.28	24-Jun-17	3:13:48	H5-17-WDM-0396	1
60	PCB-80		1252115	0.677	NO	20.39	50	16.661	0.87		100				2962	1	8424256	12310625	2844	12310625	505613.8	746501.2	0.937	20.36	20.43	24-Jun-17	3:13:48	H5-17-WDM-0396	1
61	PCB-79		1378644	0.668	NO	21.23	50	16.309	0.958		100				2962	1	9007238	13524564	3040.9	13524564	552290.1	826353.9	0.9752	21.19	21.26	24-Jun-17	3:13:48	H5-17-WDM-0396	1
62	PCB-78		1215218.1	0.674	NO	21.54	50	17.236	0.844		100				2962	1	8430951	12534891	2846.3	12534891	489161.9	726056.1	0.9895	21.5	21.57	24-Jun-17	3:13:48	H5-17-WDM-0396	1
63	PCB-81		1246690	0.675	NO	21.78	45.39009	16.934		0.935	90.8				2962	1	8508899	12657277	2872.6	12657277	502476.1	744213.9	1.0007	21.75	21.82	24-Jun-17	3:13:48	H5-17-WDM-0396	1
64	PCB-77		1245352.9	0.66	NO	22.09	46.9661	16.52		0.898	93.9				2962	1	8177846	12157749	2760.9	12157749	495041.2	750311.8	1.0007	22.06	22.13	24-Jun-17	3:13:48	H5-17-WDM-0396	1
65	* PCB-104		1221693.2	1.575	NO	17.49	49.96419	17.364		1.102	99.9				642	509	12974238	8313755	20194.3	16327.3	747202.9	474490.3	1	17.45	17.52	24-Jun-17	3:13:48	H5-17-WDM-0396	1
66	PCB-96		1142661.8	1.581	NO	17.74	50	17.248	1.18		100				642	509	12072651	7547775	18791	14823	699937.9	442724	1.0141	17.7	17.77	24-Jun-17	3:13:48	H5-17-WDM-0396	1
67	* PCB-103		959154.5	1.593	NO	18.71	50	17.271	0.99		100	26-Jun-17	RS170626MA		1126404	1152715	10176667	6452698	9	5.6	589244.4	369910.1	1.0699	18.68	18.74	24-Jun-17	3:13:48	H5-17-WDM-0396	1
68	PCB-94		803400.3	1.573	NO	18.86	50	18.046	0.829		100	26-Jun-17	RS170626MA		1126404	1152715	8862644	5644359	7.9	4.9	491105.6	312294.7	1.0783	18.82	18.89	24-Jun-17	3:13:48	H5-17-WDM-0396	1
69	PCB-95		852231.4	1.571	NO	19.1	50	17.171	0.88		100	26-Jun-17	RS170626MA		1126404	1152715	8941267	5661558	7.9	4.9	520723.3	331508.1	1.0923	19.07	19.14	24-Jun-17	3:13:48	H5-17-WDM-0396	1
70	PCB-100/93/102/98		3537220.8	1.584	NO	19.3	200	5.49	0.913		100	26-Jun-17	RS170626MA		1126404	1152715	11905011	7525656	10.6	6.5	2168296	1368925	1.1035	19.27	19.33	24-Jun-17	3:13:48	H5-17-WDM-0396	1
71	PCB-88/91		1716945.3	1.576	NO	19.56	100	11.241	0.886		100	26-Jun-17	RS170626MA		1126404	1152715	11809474	7501629	10.5	6.5	1050526	666419.8	1.1185	19.53	19.59	24-Jun-17	3:13:48	H5-17-WDM-0396	1
72	PCB-84		732542.6	1.587	NO	19.71	50	17.431	0.756		100	26-Jun-17	RS170626MA		1126404	1152715	7832301	4984391	7	4.3	449327.7	283214.9	1.1269	19.67	19.74	24-Jun-17	3:13:48	H5-17-WDM-0396	1
73	PCB-89		811492.4	1.547	NO	19.97	50	17.507	0.838		100	26-Jun-17	RS170626MA		1126404	1152715	8628361	5547507	7.7	4.8	492864.7	318627.7	1.1418	19.93	20	24-Jun-17	3:13:48	H5-17-WDM-0396	1
74	PCB-121		1209230.5	1.564	NO	20.1	50	17.819	1.248		100	26-Jun-17	RS170626MA		1126404	1152715	13144527	8399649	11.7	7.3	737668.9	471561.5	1.1493	20.07	20.13	24-Jun-17	3:13:48	H5-17-WDM-0396	1
75	PCB-92		853418.9	1.577	NO	20.33	50	17.535	0.881		100	26-Jun-17	RS170626MA		1126404	1152715	9157247	5810651	8.1	5	522224.2	331194.7	1.1624	20.29	20.36	24-Jun-17	3:13:48	H5-17-WDM-0396	1
76	PCB-113/90/101		2717998.5	1.556	NO	20.62	150	14.56	0.935		100	26-Jun-17	RS170626MA		1126404	1152715	24088706	15589588	21.4	13.5	1654392	1063607	1.1792	20.59	20.66	24-Jun-17	3:13:48	H5-17-WDM-0396	1
77	PCB-83/99		1700676.9	1.56	NO	20.93	100	13.745	0.878		100	26-Jun-17	RS170626MA		1126404	1152715	14243757	9154188	12.6	7.9	1036270	664406.5	0.9069	20.9	20.97	24-Jun-17	3:13:48	H5-17-WDM-0396	1
78	PCB-112		1126786.8	1.571	NO	21.03	50	16.278	1.163		100	26-Jun-17	RS170626MA		1126404	1152715	11207472	7154462	9.9	6.2	688499.1	438287.7	0.9111	21	21.06	24-Jun-17	3:13:48	H5-17-WDM-0396	1
79	PCB-109/119/86/97/125/87		5835605.8	1.581	NO	21.23	300	9.44	1.004		100	26-Jun-17	RS170626MA		1126404	1152715	33744004	21392510	30	18.6	3574696	2260910	0.9196	21.19	21.26	24-Jun-17	3:13:48	H5-17-WDM-0396	1
80	PCB-117/116/85/110/115		5305336.1	1.574	NO	21.63	250	5.942	1.095		100	26-Jun-17	RS170626MA		1126404	1152715	19274818	12309752	17.1	10.7	3243939	2061397	0.9373	21.6	21.67	24-Jun-17	3:13:48	H5-17-WDM-0396	1
81	PCB-82		743043.6	1.564	NO	21.9	50	16.248	0.767		100	26-Jun-17	RS170626MA		1126404	1152715	7364407	4739263	6.5	4.1	453242.5	289801.1	0.9487	21.86	21.93	24-Jun-17	3:13:48	H5-17-WDM-0396	1
82	PCB-111		1174376.2	1.552	NO	22.03	50	17.494	1.212		100	26-Jun-17	RS170626MA		1126404	1152715	12493936	8057088	11.1	7	714203.4	460172.8	0.9543	21.99	22.06	24-Jun-17	3:13:48	H5-17-WDM-0396	1
83	PCB-120		1239829.7	1.618	NO	22.27	50	17.091	1.28		100	26-Jun-17	RS170626MA		1126404	1152715	13097635	8339768	11.6	7.2	766336.4	473493.3	0.9649	22.24	22.31	24-Jun-17	3:13:48	H5-17-WDM-0396	1
84	* PCB-108/124		2201633.9	1.612	NO	22.9	100	16.776	1.136		100				2344	2257	22793892	14456305	9723.5	6404.6	1358758	842875.7	0.9922	22.87	22.93	24-Jun-17	3:13:48	H5-17-WDM-0396	1
85	PCB-107		1166041.2	1.567	NO	23.03	50	15.787	1.204		100				2344	2257	11237603	7088812	4793.8	3140.6	711825.1	454216.2	0.9979	23	23.07	24-Jun-17	3:13:48	H5-17-WDM-0396	1
86	PCB-123		980660.9	1.566	NO	23.1	45.51811	18.305		1.121	91				2344	2257	10956181	7006275	4673.7	3104	598549.6	382111.3	1.0007	23.06	23.13	24-Jun-17	3:13:48	H5-17-WDM-0396	1
87	PCB-106		994501.4	1.594	NO	23.16	50	17.253	1.027		100				2344	2257	10543584	6679181	4497.7	2959.1	611120.1	383381.3	0.9965	23.13	23.2	24-Jun-17	3:13:48	H5-17-WDM-0396	1
88	PCB-118		1108091.9	1.583	NO	23.26	48.70763	17.543		1.244	97.4				2344	2257	11914513	7581602	5082.5	3358.9	679146.4	428945.5	1.0007	23.23	23.3	24-Jun-17	3:13:48	H5-17-WDM-0396	1
89	PCB-122		985607.5	1.591	NO	23.46	50	17.759	1.017		100				2344	2257	10746886	6746540	4584.4	2988.9	605157.4	380450.1	0.9958	23.43	23.49	24-Jun-17	3:13:48	H5-17-WDM-0396	1
90	PCB-114		1091132.1	1.607	NO	23.56	48.84627	16.908		1.255	97.7				2344	2257	11373454	7174958	4851.7	3178.7	672651.7	418480.4	1	23.52	23.59	24-Jun-17	3:13:48	H5-17-WDM-0396	1
91	PCB-105		1129381.1	1.579	NO	23.9	50.19609	16.136		1.193	100.4				2344	2257	11156724	7165534	4759.3	3174.6	691423.6	437957.6	1	23.87	23.94	24-Jun-17	3:13:48	H5-17-WDM-0396	1
92	PCB-127		1141159.3	1.596	NO	24.63	50	16.035	1.178		100				2344	2257	11249216	7097999	4798.7	3144.7	701548.2	439611.2	1.0302	24.59	24.66	24-Jun-17	3:13:48	H5-17-WDM-0396	1
93	PCB-126		1081186	1.616	NO	25.5	49.77198	15.726		1.253	99.5				2344	2257	10502152	6560741	4480	2906.6	667828.6	413357.4	1	25.46	25.53	24-Jun-17	3:13:48	H5-17-WDM-0396	1
94	* PCB-155		1206083.8	1.284	NO	20.51	52.25311	17.454		1.067	104.5				498	495	11832969	9165900	23771.3	18518.4	677947.6	528136.2	1.0008	20.47	20.54	24-Jun-17	3:13:48	H5-17-WDM-0396	1
95	PCB-152		969244.6	1.255	NO	20.65	50	18.815	1.157		100				498	495	10151202	8032585	20392.8	16228.7	539521.1	429723.5	1.008	20.62	20.69	24-Jun-17	3:13:48	H5-17-WDM-0396	1
96	PCB-150		1220399.9	1.256	NO	20.72	50	15.329	1.456		100				498	495	10413880	8540655	20920.5	17255.1	679364.6	541035.3	1.0112	20.69	20.75	24-Jun-17	3:13:48	H5-17-WDM-0396	1
97	PCB-136		1044756.3	1.232	NO	20.95	50	17.191	1.247		100				498	495	9913125	8123945	19914.6	16413.2	576654.8	468101.4	1.0223	20.92	20.98	24-Jun-17	3:13:48	H5-17-WDM-0396	1
98	PCB-145		1021623.2	1.262	NO	21.1	50	17.634	1.219		100				498	495	10049545	7975902	20188.6	16114.1	569906	451717.2	1.0295	21.06	21.13	24-Jun-17	3:13:48	H5-17-WDM-0396	1
99	PCB-148		813127.1	1.288	NO	21.83	50	17.651	0.97		100				498	495	8080232	6202335	16232.4	12530.9	457789.1	355338	1.0654	21.8	21.86	24-Jun-17	0.134583	H5-17-WDM-0396	1
100	PCB-151/135		1667143.4	1.259	NO	22.19	100	12.243	0.995		100				498	495	11373712	9029765	22848.7	18243.3	928998.5	738144.9	1.0829	22.16	22.22	24-Jun-17	0.134583	H5-17-WDM-0396	1
101	PCB-154		824623.3	1.298	NO	22.27	50	18.093	0.984		100				498	495	8428704	6534587	16932.5	13202.2	465850	358773.3	1.0869	22.24	22.31	24-Jun-17	0.134583	H5-17-WDM-0396	1
102	PCB-144		793063.3	1.263	NO	22.47	50	17.566	0.946		100				498	495	7776347	6154251	15622	12433.8	442695.8	350367.5	1.0965	22.43	22.5	24-Jun-17	0.134583	H5-17-WDM-0396	1
103	* PCB-147/149		1601713.9	1.257	NO	22.65	100	16.614	0.956		100				4517	4126	14819801	11857427	3280.7	2873.6	892013.1	709700.8	1.1055	22.62	22.69	24-Jun-17	3:13:48	H5-17-WDM-0396	1
104	PCB-134/143		1431033.8	1.24	NO	22.82	100	12.123	0.854		100				4517	4126	9605086	7760871	2126.3	1880.8	792302.9	638730.9	1.1136	22.78	22.85	24-Jun-17	3:13:48	H5-17-WDM-0396	1
105	PCB-139/140		1575980.8	1.245	NO	22.98	100	15.95	0.94		100				4517	4126	13942040	11115254	3086.4	2693.8	874091.8	701889.1	1.1216	22.95	23.02	24-Jun-17	3:13:48	H5-17-WDM-0396	1
106	PCB-131		722435.4	1.26	NO	23.1	50	16.976	0.862		100				4517	4126	6838573	5439197	1513.9	1318.2	402843	319592.4	0.8749	23.06	23.13	24-Jun-17	3:13:48	H5-17-WDM-0396	1
107	PCB-142		735158.5	1.275	NO	23.2	50	16.914	0.877		100				4517	4126	6969627	5494906	1542.9	1331.7	412066.7	323091.8	0.8787	23.16	23.23	24-Jun-17	3:13:48	H5-17-WDM-0396	1
108	PCB-132		760703.6	1.265	NO	23.36	50	16.739	0.908		100				4517	4126	7111788	5589971	1574.3	1354.7	424872	335831.6	0.8849	23.33	23.39	24-Jun-17	3:13:48	H5-17-WDM-0396	1
109	PCB-133		748954.4	1.22	NO	23.54	50	17.174	0.894		100				4517	4126	7067763	5813376	1564.6	1408.9	411529.9	337424.5	0.8917	23.51	23.57	24-Jun-17	3:13:48	H5-17-WDM-0396	1
110	PCB-165		969764	1.282	NO	23.75	50	17.342	1.157		100				4517	4126	9448302	7376024	2091.6	1787.6	544810.3	424953.7	0.8998	23.72	23.79	24-Jun-17	3:13:48	H5-17-WDM-0396	1
111	PCB-146		886449.1	1.259	NO	23.89	50	17.362	1.058		100				4517	4126	8578620	6732402	1899.1	1631.6	494109.6	392339.6	0.9048	23.85	23.92	24-Jun-17	3:13:48	H5-17-WDM-0396	1
112	PCB-161		972753.2	1.257	NO	23.95	50	17.214	1.161		100				4517	4126	9324396	7462957	2064.1	1808.6	541680.6	431072.6	0.9073	23.92	23.99	24-Jun-17	3:13:48	H5-17-WDM-0396	1
113	PCB-153/168		1966579.6	1.265	NO	24.21	100	15.475	1.173		100				4517	4126	16998176	13409380	3762.9	3249.8	1098450	868130.1	0.9172	24.18	24.25	24-Jun-17	3:13:48	H5-17-WDM-0396	1
114	PCB-141		692239.9	1.264	NO	24.33	50	17.437	0.826		100				4517	4126	6739290	5318275	1491.9	1288.9	386484.8	305755.1	0.9216	24.3	24.36	24-Jun-17	3:13:48	H5-17-WDM-0396	1
115	PCB-130		695923.1	1.268	NO	24.54	50	16.705	0.83		100				4517	4126	6499037	5122892	1438.7	1241.5	389047.9	306875.2	0.9297	24.51	24.58	24-Jun-17	3:13:48	H5-17-WDM-0396	1
116	PCB-137/164		1715661.8	1.262	NO	24.72	100	9.48	1.024		100	26-Jun-17	RS170626MJ		4517	4126	9072786	7084439	2008.4	1716.9	957077.4	758584.4	0.9365	24.69	24.76	24-Jun-17	3:13:48	H5-17-WDM-0396	1
117	PCB-138/163/129		2475101.8	1.258	NO	24.89	150	13.715	0.985		100				4517	4126	18915532	15008984	4187.3	3637.4	1379161	1095941	0.9427	24.85	24.92	24-Jun-17	3:13:48	H5-17-WDM-0396	1
118	PCB-160		1051992.9	1.293	NO	24.99	50	16.67	1.255		100				4517	4126	9887898	7677232	2188.9	1860.6	593141.8	458851.1	0.9465	24.95	25.02	24-Jun-17	3:13:48	H5-17-WDM-0396	1
119	PCB-158		1043476	1.258	NO	25.09	50	17.153	1.245		100				4517	4126	9973507	7951977	2207.8	1927.2	581454.6	462021.4	0.9502	25.05	25.12	24-Jun-17	3:13:48	H5-17-WDM-0396	1
120	PCB-128/166		1747967.3	1.261	NO	25.56	100	14.489	1.043		100				4517	4126	14124874	11161005	3126.8	2704.9	974868.5	773098.8	0.9683	25.53	25.6	24-Jun-17	3:13:48	H5-17-WDM-0396	1
121	PCB-159		1055491.6	1.259	NO	26.02	50	16.608	1.26		100				4517	4126	9770291	7717195	2162.9	1870.3	588281.7	467209.9	0.9857	25.99	26.06	24-Jun-17	3:13:48	H5-17-WDM-0396	1
122	PCB-162		1030821.1	1.259	NO	26.17	50	17.022	1.23		100				4517	4126	9779133	7719147	2164.8	1870.7	574505.4	456315.7	0.9913	26.14	26.2	24-Jun-17	3:13:48	H5-17-WDM-0396	1
123	PCB-167		1006570.9	1.26	NO	26.42	47.93702	16.402		1.401	95.9				4517	4126	9204938	7357920	2037.7	1783.2	561204.1	445366.9	1.0006	26.38	26.45	24-Jun-17	3:13:48	H5-17-WDM-0396	1
124	PCB-156/157		2015433.6	1.265	NO	27.06	94.47638	13.177		1.36	94.5				4517	4126	14834192	11709310	3283.8	2837.8	1125753	889680.6	1.0006	27.02	27.09	24-Jun-17	3:13:48	H5-17-WDM-0396	1
125	PCB-169		927198	1.277	NO	28.72	48.34007	15.866		1.302	96.7				4517	4126	8251200	6453269	1826.6	1564	520061.7	407136.3	1.0006	28.68	28.75	24-Jun-17	3:13:48	H5-17-WDM-0396	1
126	* PCB-188		881139	0.945	NO	23.51	42.18028	17.319		0.85	84.4				1616	1246	7414060	7916395	4588.4	6351.8	428100.4	453038.5	1.0007	23.47	23.54	24-Jun-17	3:13:48	H5-17-WDM-0396	1
127	PCB-179		839999.2	0.928	NO	23.72	50	17.564	0.897		100				1616	1246	7102686	7642073	4395.7	6131.7	404386.8	435612.3	1.0098	23.69	23.76	24-Jun-17	3:13:48	H5-17-WDM-0396	1
128	PCB-184		931176.6	0.938	NO	23.95	50	16.484	0.994		100				1616	1246	7427592	7999302	4596.8	6418.3	450584.3	480592.3	1.0196	23.92	23.99	24-Jun-17	3:13:48	H5-17-WDM-0396	1
129	PCB-176		874613.6	0.927	NO	24.18	50	17.272	0.934		100				1616	1246	7265044	7820144	4496.2	6274.6	420637	453976.6	1.0294	24.15	24.22	24-Jun-17	3:13:48	H5-17-WDM-0396	1
130	PCB-186		832400.8	0.933	NO	24.43	50	16.786	0.889		100				1616	1246	6743725	7305906	4173.5	5861.9	401758.5	430642.3	1.0399	24.39	24.46	24-Jun-17	3:13:48	H5-17-WDM-0396	1
131	PCB-178		631423.3	0.925	NO	25.09	50	17.361	0.674		100				1616	1246	5266116	5703053	3259.1	4575.9	303338	328085.3	1.0678	25.05	25.12	24-Jun-17	3:13:48	H5-17-WDM-0396	1
132	PCB-175		655570	0.927	NO	25.41	50	17.4	0.7		100				1616	1246	5487065	5889803	3395.8	4725.7	315342.3	340227.7	1.0818	25.38	25.45	24-Jun-17	3:13:48	H5-17-WDM-0396	1
133	PCB-187		783089.1	0.92	NO	25.56	50	16.652	0.836		100				1616	1246	6248857	6725814	3867.3	5396.5	375257.4	407831.7	1.0881	25.53	25.6	24-Jun-17	3:13:48	H5-17-WDM-0396	1
134	PCB-182		635638.5	0.928	NO	25.66	50	17.513	0.678		100				1616	1246	5356748	5761646	3315.2	4622.9	305878.6	329759.9	1.0923	25.63	25.69	24-Jun-17	3:13:48	H5-17-WDM-0396	1
135	PCB-183		652355.7	0.933	NO	25.87	50	18.097	0.696		100				1616	1246	5697310	6058720	3525.9	4861.3	314828	337527.6	1.1014	25.84	25.91	24-Jun-17	3:13:48	H5-17-WDM-0396	1
136	PCB-185		667001.5	0.92	NO	25.96	50	16.415	0.712		100				1616	1246	5246518	5710880	3246.9	4582.2	319620.9	347380.6	1.1049	25.92	25.99	24-Jun-17	3:13:48	H5-17-WDM-0396	1
137	PCB-174		585202.7	0.933	NO	26.02	50	17.36	0.625		100				1616	1246	4902265	5304826	3033.9	4256.4	282380.6	302822.1	1.1077	25.99	26.06	24-Jun-17	3:13:48	H5-17-WDM-0396	1
138	PCB-177		617969.5	0.929	NO	26.25	50	16.296	0.66		100				1616	1246	4850034	5257153	3001.6	4218.1	297625.3	320344.1	1.1175	26.22	26.29	24-Jun-17	3:13:48	H5-17-WDM-0396	1
139	PCB-181		654446.5	0.922	NO	26.47	50	16.758	0.699		100				1616	1246	5262000	5673494	3256.5	4552.2	314000.8	340445.7	0.8827	26.43	26.5	24-Jun-17	3:13:48	H5-17-WDM-0396	1
140	PCB-171/173		1162015	0.928	NO	26.58	100	16.61	0.62		100				1616	1246	9287622	10002724	5747.9	8025.8	559169.8	602845.3	0.8866	26.55	26.61	24-Jun-17	3:13:48	H5-17-WDM-0396	1
141	PCB-172		619905.7	0.927	NO	27.39	50	16.292	0.662		100				1616	1246	4858901	5216644	3007.1	4185.6	298233.7	321672	0.9134	27.35	27.42	24-Jun-17	3:13:48	H5-17-WDM-0396	1
142	PCB-192		734809.8	0.917	NO	27.53	50	17.222	0.784		100				1616	1246	6053527	6586136	3746.4	5284.4	351502.9	383306.9	0.9183	27.5	27.57	24-Jun-17	3:13:48	H5-17-WDM-0396	1
143	PCB-180/193		1418524.3	0.925	NO	27.7	100	13.462	0.757		100				1616	1246	9177644	9963435	5679.8	7994.2	681769.8	736754.6	0.9238	27.66	27.73	24-Jun-17	3:13:48	H5-17-WDM-0396	1
144	PCB-191		816333.5	0.926	NO	27.91	50	16.829	0.871		100				1616	1246	6604022	7105230	4087.1	5700.9	392416.6	423916.9	0.9309	27.88	27.94	24-Jun-17	3:13:48	H5-17-WDM-0396	1
145	PCB-170		582567.5	0.938	NO	28.4	50	16.898	0.622		100				1616	1246	4764065	5108242	2948.4	4098.6	281931.9	300635.6	0.9474	28.37	28.44	24-Jun-17	3:13:48	H5-17-WDM-0396	1
146	PCB-190		878913.6	0.925	NO	28.68	50	15.37	0.938		100				1616	1246	6491775	6985556	4017.6	5604.9	422372.8	456540.8	0.9567	28.65	28.72	24-Jun-17	3:13:48	H5-17-WDM-0396	1
147	* PCB-189		809050.1	1.054	NO	30	53.20616	17.019		1.179	106.4				2103	3349	7064515	6715068	3359	2004.9	415093.6	393956.5	1.0005	29.96	30.03	24-Jun-17	3:13:48	H5-17-WDM-0396	1
148	* PCB-202		1540515.6	0.893	NO	26.28	74.27063	16.479		1.025	99				689	921	11976100	13538106	17386.3	14699.3	726741.9	813773.6	1	26.25	26.32	24-Jun-17	3:13:48	H5-17-WDM-0396	1
149	PCB-201		1442576.4	0.902	NO	26.76	75	16.592	1.216		100				689	921	11350272	12650558	16477.7	13735.6	684091.3	758485.1	1.0181	26.73	26.79	24-Jun-17	3:13:48	H5-17-WDM-0396	1
150	PCB-204		1595275.1	0.911	NO	27.11	75	16.57	1.345		100				689	921	12601890	14019710	18294.7	15222.2	760543.1	834732.1	1.0313	27.07	27.14	24-Jun-17	0.134583	H5-17-WDM-0396	1
151	PCB-197		1449968.8	0.909	NO	27.24	75	17.469	1.222		100				689	921	12062744	13073921	17512	14195.3	690525.4	759443.4	1.0363	27.2	27.27	24-Jun-17	0.134583	H5-17-WDM-0396	1
152	PCB-200		1515315.4	0.909	NO	27.32	75	16.391	1.277		100				689	921	11827648	13074553	17170.7	14196	721578.2	793737.3	1.0394	27.29	27.35	24-Jun-17	0.134583	H5-17-WDM-0396	1
153	PCB-198/199		2124320.6	0.89	NO	28.72	150	14.856	0.895		100				689	921	14864695	16597865	21579.8	18021.5	1000608	1123713	0.915	28.68	28.75	24-Jun-17	0.134583	H5-17-WDM-0396	1
154	PCB-196		1039412.4	0.905	NO	29.06	75	15.874	0.876		100				689	921	7836301	8718041	11376.3	9465.8	493659.6	545752.8	0.926	29.03	29.09	24-Jun-17	3:13:48	H5-17-WDM-0396	1
155	PCB-203		1063683.3	0.898	NO	29.18	75	17.178	0.897		100				689	921	8643483	9614041	12548.1	10438.7	503185.1	560498.3	0.9297	29.14	29.21	24-Jun-17	3:13:48	H5-17-WDM-0396	1
156	* PCB-195		832214.7	0.901	NO	29.9	75	16.843	0.702		100				1120	2156	6645420	7269104	5932.6	3371.7	394549.3	437665.4	0.9527	29.87	29.93	24-Jun-17	3:13:48	H5-17-WDM-0396	1
157	PCB-194		795687.3	0.913	NO	31.12	75	16.047	0.671		100				1120	2156	6092216	6677439	5438.8	3097.2	379650.6	416036.8	0.9917	31.09	31.16	24-Jun-17	3:13:48	H5-17-WDM-0396	1
158	PCB-205		916747.5	0.911	NO	31.4	70.87732	15.271		1.135	94.5				1120	2156	6674058	7397000	5958.2	3431	437053.4	479694.1	1.0005	31.37	31.43	24-Jun-17	3:13:48	H5-17-WDM-0396	1
159	* PCB-208		836358.4	0.816	NO	29.74	71.82884	17.103		0.86	95.8				1227	2008	6429163	7883637	5241.5	3925.5	375916.8	460441.6	1.0006	29.7	29.77	24-Jun-17	3:13:48	H5-17-WDM-0396	1
160	PCB-207		803504.2	0.82	NO	30.21	75	16.023	0.962		100				1227	2008	5800874	7138333	4729.3	3554.4	362028.5	441475.7	1.0165	30.18	30.24	24-Jun-17	3:13:48	H5-17-WDM-0396	1
161	PCB-206		514175.5	0.809	NO	32.49	72.09842	14.632		0.816	96.1				1227	2008	3364224	4148335	2742.8	2065.6	229925.5	284249.9	1.0005	32.46	32.53	24-Jun-17	3:13:48	H5-17-WDM-0396	1
162	* PCB-209		670567.3	1.218	NO	33.64	79.43493	12.806		1.061	105.9				303	386	4715801	3944074	15557.5	10206.2	368252.1	302315.2	1.0005	33.6	33.67	24-Jun-17	3:13:48	H5-17-WDM-0396	1
163	13C-PCB-31		2833283.9	1.091	NO	15.77	98.21461	18.091		1.138	98.2				18251	5937	26743916	24442894	1465.4	4116.7	1478340	1354944	0.8677	15.74	15.81	24-Jun-17	3:13:48	H5-17-WDM-0396	1
164	13C-PCB-95		1594119.5	1.584	NO	19.09	94.79661	17.501		0.868	94.8				757	970	17101446	10793681	22582.9	11131.4	977169.1	616950.4	1.0914	19.05	19.12	24-Jun-17	3:13:48	H5-17-WDM-0396	1
165	13C-PCB-153		1562888.7	1.304	NO	24.18	106.5768	16.776		0.875	106.6				1498	1485	14837932	11440214	9907.1	7706.4	884485.3	678403.4	1.1801	24.15	24.22	24-Jun-17	3:13:48	H5-17-WDM-0396	1
166	13C-PCB-28		2988532.5	1.077	NO	15.94	101.5635	18.176		1.301	101.6				18251	5937	28164590	26269408	1543.2	4424.3	1549517	1439015	0.9407	15.91	15.97	24-Jun-17	3:13:48	H5-17-WDM-0396	1
167	13C-PCB-111		2140594.6	1.533	NO	22.01	100.8983	17.376		1.216	100.9				757	970	22513066	14806318	29729	15269.5	1295631	844963.7	1.0674	21.98	22.04	24-Jun-17	3:13:48	H5-17-WDM-0396	1
168	13C-PCB-178		1752345.3	1.064	NO	25.07	109.2343	17.076		1.206	109.2				1881	1182	15427823	14619306	8201.4	12364.9	903461.1	848884.1	1.0079	25.04	25.1	24-Jun-17	3:13:48	H5-17-WDM-0396	1
169	13C-PCB-1		3839854.7	3.281	NO	8.85	102.2504	19.852		0.901	102.3				2211	15542	58422232	17727086	26424.2	1140.6	2942850	897004.9	0.7494	8.81	8.88	24-Jun-17	3:13:48	H5-17-WDM-0396	1
170	13C-PCB-3		3548767.3	3.194	NO	10.38	95.66712	19.285		0.89	95.7				2211	15542	52120232	16250456	23573.8	1045.6	2702618	846149.5	0.8789	10.34	10.41	24-Jun-17	3:13:48	H5-17-WDM-0396	1
171	13C-PCB-4		2726360.5	1.617	NO	10.54	101.7296	19.388		0.643	101.7				8436	3065	32658070	20245924	3871.4	6606.4	1684466	1041895	0.8928	10.51	10.57	24-Jun-17	3:13:48	H5-17-WDM-0396	1

172	13C-PCB-15		3032594.6	1.497	NO	14.23	102.0469	18.543		0.713	102	16040	3194	33713568	22533430	2101.8	7055	1818110	1214485	1.2048	14.19	14.26	24-Jun-17	3:13:48	H5-17-WDM-0396	1
173	13C-PCB-19		2181810.1	1.032	NO	12.55	93.8119	18.911		0.558	93.8	17667	6351	20957724	20372574	1186.3	3207.7	1108255	1073555	1.0627	12.51	12.58	24-Jun-17	3:13:48	H5-17-WDM-0396	1
174	13C-PCB-37		2888117.4	1.082	NO	18.18	102.1556	17.665		1.25	102.2	18251	5937	26513046	24413910	1452.7	4111.8	1500896	1387222	1.0729	18.15	18.21	24-Jun-17	3:13:48	H5-17-WDM-0396	1
175	13C-PCB-54		2746638.5	0.804	NO	14.41	100.7794	17.516		1.205	100.8	1144	1077	21440126	26949262	18744.6	25019.7	1224003	1522636	0.8501	14.37	14.44	24-Jun-17	3:13:48	H5-17-WDM-0396	1
176	13C-PCB-81		2937553.6	0.773	NO	21.77	115.2441	17.13		1.461	115.2	1883	1446	21939174	28535708	11651.3	19729.3	1280738	1656815	1.0555	21.73	21.8	24-Jun-17	3:13:48	H5-17-WDM-0396	1
177	13C-PCB-77		2952783.8	0.775	NO	22.08	112.7545	17.054		1.501	112.8	1883	1446	21991788	28195144	11679.3	19493.9	1289505	1663279	1.0705	22.04	22.11	24-Jun-17	3:13:48	H5-17-WDM-0396	1
178	13C-PCB-104		2218818.2	1.542	NO	17.49	103.6478	16.993		1.227	103.6	514	1026	22874088	14817519	44507.7	14447.3	1346059	872759.3	1.0321	17.45	17.52	24-Jun-17	3:13:48	H5-17-WDM-0396	1
179	13C-PCB-123		1921892	1.678	NO	23.08	115.3476	17.195		0.955	115.3	2382	1785	20706016	12407970	8693.9	6951.4	1204175	717717.5	1.1193	23.05	23.11	24-Jun-17	3:13:48	H5-17-WDM-0396	1
180	13C-PCB-118		1828767.3	1.653	NO	23.25	112.5879	17.327		0.931	112.6	2382	1785	19744928	11928781	8290.4	6682.9	1139552	689215.5	1.1272	23.21	23.28	24-Jun-17	3:13:48	H5-17-WDM-0396	1
181	13C-PCB-114		1779927.1	1.658	NO	23.56	113.3556	16.512		0.9	113.4	2382	1785	18332262	11046605	7697.3	6188.7	1110207	669719.7	0.9472	23.52	23.59	24-Jun-17	3:13:48	H5-17-WDM-0396	1
182	13C-PCB-105		1885950.3	1.659	NO	23.9	114.6309	17.098		0.943	114.6	2382	1785	20117912	12064417	8447	6758.9	1176651	709298.9	0.961	23.87	23.94	24-Jun-17	3:13:48	H5-17-WDM-0396	1
183	13C-PCB-126		1733662.1	1.657	NO	25.5	113.8239	16.591		0.873	113.8	2382	1785	17939338	10740883	7532.3	6017.4	1081247	652414.8	1.0251	25.46	25.53	24-Jun-17	3:13:48	H5-17-WDM-0396	1
184	13C-PCB-155		2163221.1	1.259	NO	20.49	97.78332	17.616		1.268	97.8	919	683	21238138	16723503	23099	24488.4	1205591	957629.8	0.9937	20.46	20.52	24-Jun-17	3:13:48	H5-17-WDM-0396	1
185	13C-PCB-167		1498770.7	1.296	NO	26.4	102.4304	17.059		1.1	102.4	1498	1485	14430590	11151516	9635.1	7511.9	845939.9	652830.8	1.0614	26.37	26.43	24-Jun-17	3:13:48	H5-17-WDM-0396	1
186	13C-PCB-156/157		3137157.5	1.292	NO	27.04	211.8984	13.513		1.113	105.9	1498	1485	23896420	18354822	15955.3	12364.2	1768416	1368742	1.0872	27.01	27.07	24-Jun-17	3:13:48	H5-17-WDM-0396	1
187	13C-PCB-169		1473174.5	1.295	NO	28.7	103.0225	16.796		1.075	103	1498	1485	13963462	10787768	9323.2	7266.9	831342.8	641831.7	1.1539	28.67	28.73	24-Jun-17	3:13:48	H5-17-WDM-0396	1
188	13C-PCB-188		2457627.3	1.065	NO	23.49	103.68	17.11		1.782	103.7	1881	1182	21689596	20321376	11530.1	17187.7	1267679	1189948	0.9445	23.46	23.53	24-Jun-17	3:13:48	H5-17-WDM-0396	1
189	13C-PCB-189		1289732.7	1.087	NO	29.98	103.0378	16.864		0.941	103	2497	2030	11327825	10461062	4537.3	5152.2	671710.5	618022.2	0.9638	29.95	30.02	24-Jun-17	3:13:48	H5-17-WDM-0396	1
190	13C-PCB-202		2023602.2	0.918	NO	26.28	105.3524	16.562		1.444	105.4	846	965	16042154	17451112	18959.3	18090.2	968634.1	1054968	1.0568	26.25	26.32	24-Jun-17	3:13:48	H5-17-WDM-0396	1
191	13C-PCB-205		1139584.8	0.937	NO	31.38	105.983	15.051		1.251	106	1647	2625	8297228	8955494	5036.5	3411.1	551268.7	588316.1	1.0089	31.35	31.42	24-Jun-17	3:13:48	H5-17-WDM-0396	1
192	13C-PCB-208		1353926.7	0.709	NO	29.72	108.7861	17.074		1.448	108.8	1416	1420	9592628	13496564	6772.2	9503.1	561840.9	792085.8	0.9554	29.69	29.75	24-Jun-17	3:13:48	H5-17-WDM-0396	1
193	13C-PCB-206		873967.8	0.714	NO	32.48	103.8627	14.537		0.979	103.9	1416	1420	5292056	7411513	3736.1	5218.6	364047.5	509920.3	1.044	32.44	32.51	24-Jun-17	3:13:48	H5-17-WDM-0396	1
194	13C-PCB-209		795637.8	1.167	NO	33.62	117.6217	13.187		0.787	117.6	262	380	5650954	4797584	21548.2	12621.2	428528.9	367108.9	1.0807	33.59	33.65	24-Jun-17	3:13:48	H5-17-WDM-0396	1
195	13C-PCB-9		4167972.4	1.601	NO	11.81	100	19.033	41679.72		100	8436	3065	48828840	30531402	5788.4	9962.7	2565531	1602442	0.4747	11.77	11.84	24-Jun-17	3:13:48	H5-17-WDM-0396	1
196	13C-PCB-52		2261741	0.784	NO	16.94	100	17.895	22617.41		100	1137	2055	17791102	22653256	15842.3	11024.2	994173	1267568	0.6813	16.91	16.98	24-Jun-17	3:13:48	H5-17-WDM-0396	1
197	13C-PCB-101		1744684.5	1.543	NO	20.62	100	17.713	17446.85		100	757	970	18752976	12180097	24763.8	12561.1	1058694	685990.8	0.8291	20.59	20.66	24-Jun-17	3:13:48	H5-17-WDM-0396	1
198	13C-PCB-138		1330189.5	1.298	NO	24.87	100	17.417	13301.9		100	1498	1485	13085717	10062992	8737.1	6778.6	751299.9	578889.6	0	24.84	24.91	24-Jun-17	3:13:48	H5-17-WDM-0396	1
199	13C-PCB-194		859514.4	0.948	NO	31.11	100	15.962	8595.144		100	1647	2625	6677367	7054817	4053.2	2687.1	418333.7	441180.7	1.2507	31.07	31.14	24-Jun-17	3:13:48	H5-17-WDM-0396	1
200	Total MoCB-F1	10					154218.8		15.773			1234		38526709				1982610					24-Jun-17	3:13:48	H5-17-WDM-0396	1
201	Total DiCB-F1	8					25850.14		4.26			1200		65255292				3449879					24-Jun-17	0.134583	H5-17-WDM-0396	1
202	Total DiCB-F2	6					43778.5		8.503			805		44266616				2677101					24-Jun-17	0.134583	H5-17-WDM-0396	1
203	Total TrCB-F1	1					24.80299					840		5427551				285867.3					24-Jun-17	0.134583	H5-17-WDM-0396	1
204	Total TrCB-F2	6					175		0.84			416		32172205				1893378					24-Jun-17	0.134583	H5-17-WDM-0396	1
205	Total TrCB-F3	18					253665.8		2.947			757		97688262				5807391					24-Jun-17	3:13:48	H5-17-WDM-0396	1
206	Total TeCB-F2	1					53.17762					651		11417912				635754.8					24-Jun-17	3:13:48	H5-17-WDM-0396	1
207	Total TeCB-F3	13					1100		0.693			850		1.43E+08				8903228					24-Jun-17	3:13:48	H5-17-WDM-0396	1
208	Total TeCB-F4	27					615904.2		6.057			2962		1.54E+08				9749744					24-Jun-17	3:13:48	H5-17-WDM-0396	1
209	Total PeCB-F3	3					390.5647		28.12			642		25048776				1447227					24-Jun-17	3:13:48	H5-17-WDM-0396	1
210	Total PeCB-F4	17					1650		0.974			1126404		2.26E+08				19153559					24-Jun-17	3:13:48	H5-17-WDM-0396	1
211	Total PeCB-F5	30					855321.7		30.073			2344		1.27E+08				7593945					24-Jun-17	3:13:48	H5-17-WDM-0396	1
212	Total HxCB-F4	9					502.2531		7.192			498		88019716				5338728					24-Jun-17	3:13:48	H5-17-WDM-0396	1
213	Total HxCB-F5	38					582765.6		12.136			4517		2.43E+08				15816399					24-Jun-17	3:13:48	H5-17-WDM-0396	1
214	Total HpCB-F5	26					286395.7		2.433			1616		1.33E+08				8014642					24-Jun-17	3:13:48	H5-17-WDM-0396	1
215	Total HpCB-F6	1					53.20616					2103		8790051				523919.4					24-Jun-17	3:13:48	H5-17-WDM-0396	1
216	Total OcCB-F5	13					1757.537		10.482			689		91174235				5581473					24-Jun-17	3:13:48	H5-17-WDM-0396	1
217	Total OcCB-F6	6					292493.6		27.273			1120		20348785				1272467					24-Jun-17	3:13:48	H5-17-WDM-0396	1
218	Total NoCB-F6	3					218.9273		40.522			1227		15594261				967870.8					24-Jun-17	3:13:48	H5-17-WDM-0396	1
219	Total DeCB-F7	1					79.43493					303		4715801				368252.1					24-Jun-17	3:13:48	H5-17-WDM-0396	1
220	Total 13C-MoCB-F1	2					197.9176					2211		1.11E+08				5655475					24-Jun-17	3:13:48	H5-17-WDM-0396	1
221	Total 13C-DiCB-F1	3					202.3444		20872.57			8436		81623276				4256881					24-Jun-17	3:13:48	H5-17-WDM-0396	1
222	Total 13C-DiCB-F2	1					102.0469					16040		33713568				1818110					24-Jun-17	3:13:48	H5-17-WDM-0396	1
223	Total 13C-TrCB-F1	1					93.8119					17667		26171530				1397311					24-Jun-17	3:13:48	H5-17-WDM-0396	1
224	Total 13C-TrCB-F3	3					301.9337					18251		82694005				4605840					24-Jun-17	3:13:48	H5-17-WDM-0396	1
225	Total 13C-TeCB-F2	1					100.7794					1144		21442287				1224110					24-Jun-17	3:13:48	H5-17-WDM-0396	1
226	Total 13C-TeCB-F3	6					103.261		22617.41			1137		18366088				1027645					24-Jun-17	3:13:48	H5-17-WDM-0396	1
227	Total 13C-TeCB-F4	2					227.9986					1883		45242860				2646445					24-Jun-17	3:13:48	H5-17-WDM-0396	1
228	Total 13C-PeCB-F3	1					103.6478					514		22879193				1346317					24-Jun-17	3:13:48	H5-17-WDM-0396	1
229	Total 13C-PeCB-F4	10					300.2067		5883.94			757		58659909				3347797					24-Jun-17	3:13:48	H5-17-WDM-0396	1
230	Total 13C-PeCB-F5	5					569.7459					2382		98797898				5837466					24-Jun-17	3:13:48	H5-17-WDM-0396	1
231	Total 13C-HxCB-F4	1					97.78332					919		21346903				1211856					24-Jun-17	3:13:48	H5-17-WDM-0396	1
232	Total 13C-HxCB-F5	13					653.0343		2770.883			1498		80966857				5127900					24-Jun-17	3:13:48	H5-17-WDM-0396	1
233	Total 13C-HpCB-F5	2					212.9142					1881		37886585				2218068					24-Jun-17	3:13:48	H5-17-WDM-0396	1
234	Total 13C-HpCB-F6	1					103.0378					2497		12468271				747245.7					24-Jun-17	3:13:48	H5-17-WDM-0396	1
235	Total 13C-OcCB-F5	1					105.3524					846		16156448				975892.3					24-Jun-17	3:13:48	H5-17-WDM-0396	1
236	Total 13C-OcCB-F6	13					231.367		4363.864			1647		15746892				1023425					24-Jun-17	3:13:48	H5-17-WDM-0396	1
237	Total 13C-NoCB-F6	2					212.6488					1416		14935940				929027.8					24-Jun-17	3:13:48	H5-17-WDM-0396	1
238	Total 13C-DeCB-F7	1					117.6217					262		5650954				428528.9					24-Jun-17	3:13:48	H5-17-WDM-0396	1
239	Lockmass F1											621300		0				0					24-Jun-17	3:13:48	H5-17-WDM-0396	1
240	Lockmass F2											689285		0				0					24-Jun-17	3:13:48	H5-17-WDM-0396	1
241	Lockmass F3											880309		0				0					24-Jun-17	3:13:48	H5-17-WDM-0396	1
242	Lockmass F4											1033916		0				0					24-Jun-17	3:13:48	H5-17-WDM-0396	1
243	Lockmass F5											290232		0				0					24-Jun-17	3:13:48	H5-17-WDM-0396	1
244	Lockmass F6											141196		0				0					24-Jun-17	3:13:48	H5-17-WDM-0396	1
245	Lockmass F7											105795		0				0					24-Jun-17	3:13:48	H5-17-WDM-0396	1

Sample Name: 5-170626A01   Sample ID: H5-17-WDM-0398

	Target Analyte	#Hom	Resp	Ra	Ra fail=YES	RT	Conc.	H/A	ical RRF	User RF	%Rec	Mod.Date	Mod.Comment	Code Comments	Noise 1	Noise 2	Ion1 Ht	Ion2 Ht	Ion1 s/n	Ion2 s/n	Ion1 Area	Ion2 Area	RRT	RT LCL	RT UCL	Acq.Date	Acq.Time	ID	Spl Size
1	* PCB-1		693676.3	3.34	NO	8.85	27.29717	19.382		0.874	109.2				1512	859	10347239	3122684	6841.6	3634.1	533845.1	159831.2	1	8.81	8.88	26-Jun-17	13:01:54	H5-17-WDM-0398	1
2	PCB-2		663968.2	3.407	NO	10.26	25	19.426	0.932		100				1512	859	9971544	2938557	6593.2	3419.8	513306.7	150661.5	0.9889	10.23	10.3	26-Jun-17	13:01:54	H5-17-WDM-0398	1
3	PCB-3		698980.9	3.329	NO	10.39	28.03385	19.123		0.894	112.1				1512	859	10278356	3067923	6796.1	3570.4	537497.4	161483.5	1.0016	10.36	10.43	26-Jun-17	13:01:54	H5-17-WDM-0398	1
4	*PCB-4		458564.3	1.339	NO	10.56	24.61359	18.667		0.901	98.5				2054	1330	4900078	3713729	2385.1	2792.8	262499.7	196064.7	1	10.52	10.59	26-Jun-17	13:01:54	H5-17-WDM-0398	1
5	PCB-10		678678.1	1.333	NO	10.67	25	19.363	1.225		100				2054	1330	7508243	5647657	3654.7	4247.2	387755.3	290922.8	1.0109	10.64	10.71	26-Jun-17	13:01:54	H5-17-WDM-0398	1
6	PCB-9		700463.8	1.327	NO	11.84	25	18.006	1.264		100				2054	1330	7191592	5396618	3500.5	4058.4	399391.8	301072	1.1214	11.81	11.87	26-Jun-17	13:01:54	H5-17-WDM-0398	1
7	PCB-7		754440	1.332	NO	11.94	25	19.125	1.361		100				2054	1330	8242166	6180424	4011.9	4647.9	430955.3	323484.6	1.1308	11.91	11.97	26-Jun-17	13:01:54	H5-17-WDM-0398	1
8	PCB-6		732371.3	1.329	NO	12.09	25	17.944	1.322		100				2054	1330	7499661	5697718	3650.5	4284.9	417942.6	314428.7	1.1448	12.05	12.12	26-Jun-17	13:01:54	H5-17-WDM-0398	1
9	PCB-5		656860.8	1.333	NO	12.3	25	18.682	1.185		100				2054	1330	7010788	5194556	3412.5	3906.5	375268.3	281592.5	1.165	12.27	12.33	26-Jun-17	13:01:54	H5-17-WDM-0398	1
10	PCB-8		706884.3	1.352	NO	12.37	25	18.659	1.276		100				2054	1330	7582505	5679734	3690.8	4271.3	406367.4	300516.8	1.1713	12.33	12.4	26-Jun-17	13:01:54	H5-17-WDM-0398	1
11	* PCB-14		758678.1	1.553	NO	13.36	25	18.209	1.369		100				1767	1237	8404531	5365965	4756.7	4337.7	461555.3	297122.8	0.9379	13.32	13.39	26-Jun-17	13:01:54	H5-17-WDM-0398	1
12	PCB-11		674625.9	1.563	NO	13.86	25	18.226	1.217		100				1767	1237	7498332	4801624	4243.8	3881.5	411409.4	263216.5	0.9735	13.83	13.9	26-Jun-17	13:01:54	H5-17-WDM-0398	1
13	PCB-13/12		1322463.4	1.562	NO	14.06	50	14.461	1.193		100				1767	1237	11659080	7428600	6598.6	6005	806230.3	516233.2	0.9873	14.03	14.09	26-Jun-17	13:01:54	H5-17-WDM-0398	1
14	PCB-15		710837.5	1.57	NO	14.24	24.96128	17.804		1.204	99.8				1767	1237	7731560	4954751	4375.8	4005.3	434253.7	276583.8	1	14.21	14.27	26-Jun-17	13:01:54	H5-17-WDM-0398	1
15	* PCB-19		444353.5	1.063	NO	12.58	24.99444	18.145		1.03	100				537	745	4154732	3844623	7730	5160.6	228969.2	215384.3	1.0013	12.55	12.61	26-Jun-17	13:01:54	H5-17-WDM-0398	1
16	* PCB-30/18		810177.8	1.067	NO	13.67	50	14.142	0.803		100				499	654	5914969	5519657	11847.6	8443.8	418269.5	391908.3	1.0879	13.63	13.7	26-Jun-17	13:01:54	H5-17-WDM-0398	1
17	PCB-17		307782.1	1.057	NO	13.93	25	18.485	0.61		100				499	654	2923001	2766594	5854.7	4232.2	158130.9	149651.2	1.1088	13.9	13.96	26-Jun-17	13:01:54	H5-17-WDM-0398	1
18	PCB-27		497379.4	1.055	NO	14.06	25	18.12	0.986		100				499	654	4626041	4347402	9265.9	6650.5	255293.8	242085.6	1.1192	14.03	14.09	26-Jun-17	13:01:54	H5-17-WDM-0398	1
19	PCB-24		478627.8	1.071	NO	14.14	25	18.489	0.949		100				499	654	4577261	4288664	9168.2	6560.6	247568.8	231059	1.1258	14.11	14.18	26-Jun-17	13:01:54	H5-17-WDM-0398	1
20	PCB-16		260868.3	1.071	NO	14.23	25	19.477	0.517		100				499	654	2627909	2461846	5263.7	3766	134924.9	125943.4	1.1323	14.19	14.26	26-Jun-17	13:01:54	H5-17-WDM-0398	1
21	PCB-32		562584.2	1.054	NO	14.52	25	17.281	1.115		100				499	654	4989218	4733209	9993.4	7240.7	288703.9	273880.3	1.1558	14.49	14.55	26-Jun-17	13:01:54	H5-17-WDM-0398	1
22	* PCB-34		571094.1	0.975	NO	15.22	25	17.703	1.132		100				1560	1	4989828	5087502	3198.5	5087502	281862.8	289231.3	0.8369	15.18	15.25	26-Jun-17	13:01:54	H5-17-WDM-0398	1
23	PCB-23		558715.7	1.004	NO	15.3	25	17.67	1.108		100				1560	1	4946243	5014126	3170.6	5014126	279929.4	278786.2	0.8414	15.26	15.33	26-Jun-17	13:01:54	H5-17-WDM-0398	1
24	PCB-29/26		970949.1	0.982	NO	15.49	50	15.922	0.963		100				1560	1	7658999	7714135	4909.5	7714135	481032.8	489916.3	0.8523	15.46	15.53	26-Jun-17	13:01:54	H5-17-WDM-0398	1
25	PCB-25		619025.7	0.974	NO	15.61	25	16.63	1.227		100				1560	1	5080263	5186469	3256.5	5186469	305494.5	313531.2	0.8587	15.58	15.64	26-Jun-17	13:01:54	H5-17-WDM-0398	1
26	PCB-31		622337.9	0.979	NO	15.79	25	18.048	1.234		100				1560	1	5555581	5666332	3561.2	5666332	307830.5	314507.5	0.8686	15.76	15.82	26-Jun-17	13:01:54	H5-17-WDM-0398	1
27	PCB-28/20		1088424.8	0.984	NO	15.97	50	14.379	1.079		100				1560	1	7760665	7868210	4974.7	7868210	539717.1	548707.7	0.8786	15.94	16.01	26-Jun-17	13:01:54	H5-17-WDM-0398	1
28	PCB-21/33		1177462.4	0.955	NO	16.1	50	14.952	1.167		100				1560	1	8598809	8818466	5511.9	8818466	575100.4	602362	0.8858	16.07	16.14	26-Jun-17	13:01:54	H5-17-WDM-0398	1
29	PCB-22		526885.7	0.93	NO	16.34	25	18.258	1.045		100				1560	1	4634507	4892369	2970.8	4892369	253830.3	273055.4	0.8985	16.3	16.37	26-Jun-17	13:01:54	H5-17-WDM-0398	1
30	PCB-36		650348.9	0.978	NO	17.18	25	15.398	1.289		100				1560	1	4951696	5041265	3174.1	5041265	321573.2	328775.8	0.9447	17.14	17.21	26-Jun-17	13:01:54	H5-17-WDM-0398	1
31	PCB-39		551608.2	0.994	NO	17.37	25	17.254	1.094		100				1560	1	4745355	4788830	3041.8	4788830	275030.7	276577.4	0.9556	17.34	17.41	26-Jun-17	13:01:54	H5-17-WDM-0398	1
32	PCB-38		593645.1	0.983	NO	17.72	25	17.264	1.177		100				1560	1	5081035	5138842	3257	5138842	294319.7	299325.5	0.9746	17.69	17.75	26-Jun-17	13:01:54	H5-17-WDM-0398	1
33	PCB-35		553720	0.979	NO	17.97	25	17.416	1.098		100	27-Jun-17	ES170627MB		1560	1	4769686	4906836	3057.4	4906836	273875.4	279844.6	0.9882	17.93	18	26-Jun-17	13:01:54	H5-17-WDM-0398	1
34	PCB-37		557435.5	0.964	NO	18.2	26.55881	17.292		0.909	106.2	27-Jun-17	ES170627MB		1560	1	4730578	4923470	3032.3	4923470	273570.9	283864.7	1.0009	18.16	18.23	26-Jun-17	13:01:54	H5-17-WDM-0398	1
35	* PCB-54		1154225.4	0.793	NO	14.44	53.5596	18.414		0.991	107.1				544	735	9400649	11823637	17287.6	16091.1	510507.3	643718.1	1.0011	14.4	14.47	26-Jun-17	13:01:54	H5-17-WDM-0398	1
36	* PCB-50/53		1519524	0.666	NO	15.64	100	17.003	0.669		100				644	1309	10332891	15768381	16045.8	12049.1	607697.1	911826.9	1.0847	15.61	15.68	26-Jun-17	13:01:54	H5-17-WDM-0398	1
37	PCB-45/51		1453311.4	0.67	NO	16.06	100	15.075	0.64		100				644	1309	8791135	13133935	13651.6	10036.1	583154.4	870157.1	1.1132	16.02	16.09	26-Jun-17	13:01:54	H5-17-WDM-0398	1
38	PCB-46		588799.9	0.663	NO	16.22	50	17.634	0.519		100				644	1309	4138872	6300071	6427.2	4814.1	234714.5	354085.3	1.1247	16.19	16.25	26-Jun-17	13:01:54	H5-17-WDM-0398	1
39	PCB-52		702184.8	0.664	NO	16.96	50	19.043	0.618		100				644	1309	5333304	7980179	8282	6097.9	280063.4	422121.5	1.1761	16.93	16.99	26-Jun-17	13:01:54	H5-17-WDM-0398	1
40	PCB-73		1071455.4	0.677	NO	17.04	50	16.13	0.944		100				644	1309	6975745	10190516	10832.5	7786.9	432460.3	638995.2	1.1818	17.01	17.08	26-Jun-17	13:01:54	H5-17-WDM-0398	1
41	PCB-43		604640.8	0.686	NO	17.11	50	19.44	0.533		100				644	1309	4781067	6963872	7424.4	5321.3	245939.8	358701	1.1863	17.08	17.14	26-Jun-17	13:01:54	H5-17-WDM-0398	1
42	PCB-69/49		1817724.4	0.68	NO	17.21	100	12.579	0.8		100				644	1309	9257698	13687985	14376.1	10459.4	735943.4	1081781	1.1932	17.17	17.24	26-Jun-17	13:01:54	H5-17-WDM-0398	1
43	PCB-48		738139.8	0.676	NO	17.41	50	17.162	0.65		100				644	1309	5109815	7474093	7934.9	5711.2	297743.2	440396.7	1.2069	17.37	17.44	26-Jun-17	13:01:54	H5-17-WDM-0398	1
44	PCB-44/47/65		2368806	0.677	NO	17.54	150	17.356	0.695		100				644	1309	16600460	24553484	25778.6	18762.1	956481	1412325	1.2161	17.5	17.57	26-Jun-17	13:01:54	H5-17-WDM-0398	1
45	PCB-59/62/75		2917425.8	0.677	NO	17.7	150	16.82	0.857		100				644	1309	19812072	29470594	30765.8	22519.4	1177896	1739530	1.2275	17.67	17.74	26-Jun-17	13:01:54	H5-17-WDM-0398	1
46	PCB-42		696085.4	0.674	NO	17.83	50	16.888	0.613		100				644	1309	4733806	6970684	7351	5326.5	280302.5	415782.8	1.2366	17.8	17.87	26-Jun-17	13:01:54	H5-17-WDM-0398	1
47	PCB-41/71/40		2222004.6	0.67	NO	18.1	150	11.668	0.652		100				644	1309	10405430	15443191	16158.4	11800.6	891808.3	1330196	1.2549	18.06	18.13	26-Jun-17	13:01:54	H5-17-WDM-0398	1
48	PCB-64		1021712	0.684	NO	18.21	50	17.493	0.9		100				644	1309	7259745	10693171	11273.5	8171	415018.8	606693.2	1.2629	18.18	18.25	26-Jun-17	0.542986	H5-17-WDM-0398	1
49	* PCB-72		963579.6	0.669	NO	18.61	50	16.738	0.849		100				1	1	6462669	9791934	6462669	9791934	386101.7	577477.9	0.8545	18.58	18.65	26-Jun-17	0.542986	H5-17-WDM-0398	1
50	PCB-68		1163237.7	0.675	NO	18.78	50	16.582	1.025		100				1	1	7770288	11625997	7770288	11625997	468585.3	694652.4	0.862	18.74	18.81	26-Jun-17	0.542986	H5-17-WDM-0398	1
51	PCB-57		1013475.5	0.672	NO	19.02	50	17.517	0.893		100				1	1	7137716	10576951	7137716	10576951	407466.4	606009.1	0.8732	18.99	19.05	26-Jun-17	0.542986	H5-17-WDM-0398	1
52	PCB-58		968786.3	0.667	NO	19.15	50	16.72	0.853		100				1	1	6480840	9748977	6480840	9748977	387603.8	581182.4	0.8792	19.12	19.18	26-Jun-17	13:01:54	H5-17-WDM-0398	1
53	PCB-67		1052934.9	0.678	NO	19.23	50	16.616	0.927		100				1	1	7068740	10576723	7068740	10576723	425415.5	627519.4	0.883	19.2	19.27	26-Jun-17	13:01:54	H5-17-WDM-0398	1
54	PCB-63		1004944.9	0.661	NO	19.38	50	16.183	0.885		100				1	1	6474387	9881555	6474387	9881555	400072.6	604872.3	0.8897	19.35	19.41	26-Jun-17	13:01:54	H5-17-WDM-0398	1
55	PCB-61/70/74/76		3802936.6	0.671	NO	19.58	200	10.808	0.837		100				1	1	16501524	24565730	16501524	24565730	1526735	2276202	0.8987	19.54	19.61	26-Jun-17	13:01:54	H5-17-WDM-0398	1
56	PCB-66		985559.3	0.673	NO	19.76	50	16.534	0.868		100				1	1	6554634	9627849	6554634	9627849	396423	589136.3	0.907	19.72	19.79	26-Jun-17	13:01:54	H5-17-WDM-0398	1
57	PCB-55		939376.4	0.669	NO	19.85	50	17.574	0.827		100				1	1	6614785	9932843	6614785	9932843	376404.3	562972.1	0.9115	19.82	19.89	26-Jun-17	13:01:54	H5-17-WDM-0398	1
58	PCB-56		985340.6	0.672	NO	20.13	50	17.344	0.868		100				1	1	6871049	10106573	6871049	10106573	396162.9	589177.7	0.9242	20.1	20.17	26-Jun-17	13:01:54	H5-17-WDM-0398	1
59	PCB-60		965507.3	0.669	NO	20.25	50	17.301	0.85		100				1	1	6694006	9989055	6694006	9989055	386907.5	578599.9	0.9295	20.21	20.28	26-Jun-17	13:01:54	H5-17-WDM-0398	1
60	PCB-80		995686.9	0.672	NO	20.39	50	17.089	0.877		100				1	1	6837714	10085669	6837714	10085669	400134.8	595552.1	0.9362	20.36	20.43	26-Jun-17	13:01:54	H5-17-WDM-0398	1
61	PCB-79		1046633.3	0.678	NO	21.24	50	15.682	0.922		100				1	1	6630091	9848669	6630091	9848669	422790.1	623843.2	0.9753	21.21	21.28	26-Jun-17	13:01:54	H5-17-WDM-0398	1
62	PCB-78		963738.9	0.681	NO	21.54	50	16.169	0.849		100				1	1	6315185	9331214	6315185	9331214	390565.7	573173.3	0.9888	21.5	21.57	26-Jun-17	13:01:54	H5-17-WDM-0398	1
63	PCB-81		947959.2	0.679	NO	21.8	43.60479	16.102		0.935	87.2				1	1	6172117	9119779	6172117	9119779	383306.3	564652.9	1.0008	21.76	21.83	26-Jun-17	13:01:54	H5-17-WDM-0398	1
64	PCB-77		973719.7	0.678	NO	22.09	46.88622	16.64		0.898	93.8				1	1	6544421	9713488	6544421	9713488	393288.2	580431.4	1.0007	22.06	22.13	26-Jun-17	13:01:54	H5-17-WDM-0398	1
65	* PCB-104		1046083.3	1.598	NO	17.5	47.6858	17.659		1.102	95.4				677	638	11362701	7093674	16772.7	11117.8	643436.6	402646.8	1.0009	17.47	17.54	26-Jun-17	13:01:54	H5-17-WDM-0398	1
66	PCB-96		974716.5	1.618	NO	17.74	50	17.753	1.19		100				677	638	10694889	6647106	15786.9	10417.9	602433.4	372283.1	1.0141	17.7	17.77	26-Jun-17	13:01:54	H5-17-WDM-0398	1
67	* PCB-103		822765.7	1.608	NO	18.73	50	17.656	1.004		100				737215	636219	8957229	5574489	12.2	8.8	507324.3	315441.4	1.0708	18.69	18.76	26-Jun-17	13:01:54	H5-17-WDM-0398	1
68	PCB-94		721274.8	1.565	NO	18.86	50	17.312	0.88		100				737215	636219	7618150	4873157	10.3	7.7	440057.1	281217.7	1.0783	18.82	18.89	26-Jun-17	13:01:54	H5-17-WDM-0398	1
69	PCB-95		694537	1.602	NO	19.12	50	17.386	0.848		100				737215	636219	7434692	4567379	10.1	7.2	427618.7	266918.3	1.0932	19.09	19.15	26-Jun-17	13:01:54	H5-17-WDM-0398	1
70	PCB-100/93/102/98		3047531.9	1.591	NO	19.31	200	5.43	0.93		100	27-Jun-17	ES170627Mj		737215	636219	10161152	6381554	13.8	10	1871168	1176364	1.1044	19.28	19.35	26-Jun-17	13:01:54	H5-17-WDM-0398	1
71	PCB-88/91		1478951.3	1.579	NO	19.56	100	11.324	0.902		100				737215	636219	10254625	6525206	13.9	10.3	905573.5	573377.8	1.1185	19.53	19.59	26-Jun-17	13:01:54	H5-17-WDM-0398	1
72	PCB-84		617202.6	1.617	NO	19.72	50	17.414	0.753		100				737215	636219	6640991	4056509	9	6.4	381356.1	235846.6	1.1278	19.69	19.76	26-Jun-17	13:01:54	H5-17-WDM-0398	1
73	PCB-89		703667.7	1.556	NO	19.97	50	17.622	0.859		100				737215	636219	7549013	4870772	10.2	7.7	428393.9	275273.8	1.1418	19.93	20	26-Jun-17	13:01:54	H5-17-WDM-0398	1
74	PCB-121		1062088.8	1.603	NO	20.1	50	16.914	1.296		100				737215	636219	11061778	6987620	15	11	654003.3	408085.6	1.1493	20.07	20.13	26-Jun-17	13:01:54	H5-17-WDM-0398	1
75	PCB-92		727912.2	1.592	NO	20.33	50	17.336	0.888		100				737215	636219	7749790	4920271	10.5	7.7	447029.6	280882.6	1.1624	20.29	20.36	26-Jun-17	13:01:54	H5-17-WDM-0398	1
76	PCB-113/90/101		2450489.6	1.597	NO	20.62	150	14.101	0.997		100				737215	636219	21246282	13310187	28.8	20.9	1506716	943773.7	1.1792	20.59	20.66	26-Jun-17	13:01:54	H5-17-WDM-0398	1
77	PCB-83/99		1536563.8	1.57	NO	20.93	100	12.637	0.938		100				737215	636219	11862306	7618368	16.1	12	938692.9	597870.9	0.9069	20.9	20.97	26-Jun-17	13:01:54	H5-17-WDM-0398	1
78	PCB-112		869780.3	1.57	NO	21.03	50	18.092	1.061		100				737215	636219	9613666	6213979	13	9.8	531386.2	338394.1	0.9111	21	21.06	26-Jun-17	13:01:54	H5-17-WDM-0398	1
79	PCB-109/119/86/97/125/87		5007435.9	1.588	NO	21.23	300	9.662	1.018		100	27-Jun-17	ES170627MA		737215	636219	29686550	18675220	40.3	29.4	3072362	1935074	0.9196	21.19	21.26	26-Jun-17	13:01:54	H5-17-WDM-0398	1
80	PCB-117/116/85/110/115		4574354.6	1.584	NO	21.63	250	5.788	1.116		100	27-Jun-17	ES170627MJ		737215	636219	16229971	10311341	22	16.2	2804229	1770126	0.9373	21.6	21.67	26-Jun-17	13:01:54	H5-17-WDM-0398	1
81	PCB-82		626461.8	1.604	NO	21.91	50	16.752	0.765		100				737215	636219	6464370	4011410	8.8	6.3	385888.4	240573.4	0.9494	21.88	21.95	26-Jun-17	13:01:54	H5-17-WDM-0398	1
82	PCB-111		1000026.6	1.589	NO	22.03	50	16.789	1.22		100				737215	636219	10304417	6556346	14	10.3	613752.3	386274.3	0.9543	21.99	22.06	26-Jun-17	13:01:54	H5-17-WDM-0398	1
83	PCB-120		1031285	1.607	NO	22.27	50	16.613	1.259		100	27-Jun-17	ES170627MB		737215	636219	10560793	6670685	14.3	10.5	635696.9	395588	0.9649	22.24	22.31	26-Jun-17	13:01:54	H5-17-WDM-0398	1
84	* PCB-108/124		1799854.2	1.573	NO	22.9	100	16.433	1.098		100				1623	2347	18082108	11527008	11139.5	4911	1100325	699529.7	0.9922	22.87	22.93	26-Jun-17	13:01:54	H5-17-WDM-0398	1
85	PCB-107		926300.7	1.54	NO	23.03	50	16.394	1.13		100				1623	2347	9207766	5957267	5672.5	2538.1	561670.4	364630.3	0.9979	23	23.07	26-Jun-17	13:01:54	H5-17-WDM-0398	1
86	PCB-123		824227.7	1.55	NO	23.1	47.17152	18.194		1.121	94.3				1623	2347	9115911	5891179	5615.9	2509.9	501052.3	323175.4	1.0007	23.06	23.13	26-Jun-17	13:01:54	H5-17-WDM-0398	1
87	PCB-106		854547	1.577	NO	23.18	50	16.192	1.043		100				1623	2347	8466625	5414993	5215.9	2307	522893.2	331653.8	0.9972	23.15	23.21	26-Jun-17	13:01:54	H5-17-WDM-0398	1
88	PCB-118		957359.3	1.579	NO	23.26	51.15268	16.099		1.244	102.3				1623	2347	9436720	6030894	5813.5	2569.4	586176.8	371182.5	1.0007	23.23	23.3	26-Jun-17	13:01:54	H5-17-WDM-0398	1
89	PCB-122		824513.9	1.59	NO	23.46	50	17.075	1.006		100				1623	2347	8643714	5470021	5325	2330.5	506228.7	318285.3	0.9958	23.43	23.49	26-Jun-17	13:01:54	H5-17-WDM-0398	1
90	PCB-114		925621.8	1.573	NO	23.56	49.11804	15.724		1.255	98.2				1623	2347	8897481	5747217	5481.3	2448.6	565837.4	359784.4	1	23.52	23.59	26-Jun-17	13:01:54	H5-17-WDM-0398	1
91	PCB-105		889958.2	1.587	NO	23.92	48.05037	16.412		1.193	96.1				1623	2347	8959317	5612700	5519.4	2391.3	545904.3	344053.9	1.0007	23.89	23.95	26-Jun-17	13:01:54	H5-17-WDM-0398	1
92	PCB-127		901122.3	1.541	NO	24.63	50	15.653	1.1		100				1623	2347	8555270	5566347	5270.5	2371.5	546560.3	354562	1.0302	24.59	24.66	26-Jun-17	13:01:54	H5-17-WDM-0398	1
93	PCB-126		840550.9	1.57	NO	25.5	48.32436	15.062		1.253	96.6				1623	2347	7733474	5010607	4764.2	2134.7	513444	327106.9	1	25.46	25.53	26-Jun-17	13:01:54	H5-17-WDM-0398	1
94	* PCB-155		1079815.8	1.256	NO	20.51	50.0619	17.582		1.067	100.1				922	558	10570526	8375928	11459.9	15009	601221.1	478594.8	1.0008	20.47	20.54	26-Jun-17	13:01:54	H5-17-WDM-0398	1
95	PCB-152		992255.7	1.237	NO	20.67	50	16.485	1.44		100				922	558	9046739	7194044	9807.9	12891.1	548781.4	443474.3	1.0088	20.64	20.7	26-Jun-17	13:01:54	H5-17-WDM-0398	1
96	PCB-150		964645.9	1.278	NO	20.74	50	18.324	1.4		100				922	558	9918141	7824006	10752.6	14020	541270.6	423375.3	1.012	20.7	20.77	26-Jun-17	13:01:54	H5-17-WDM-0398	1
97	PCB-136		926075.3	1.248	NO	20.97	50	16.899	1.344		100				922	558	8688126	6952532	9419.1	12458.4	514112.1	411963.1	1.0231	20.93	21	26-Jun-17	13:01:54	H5-17-WDM-0398	1
98	PCB-145		910781.3	1.268	NO	21.1	50	16.959	1.321		100				922	558	8635024	6878062	9361.6	12324.9	509161.3	401620.1	1.0295	21.06	21.13	26-Jun-17	13:01:54	H5-17-WDM-0398	1
99	PCB-148		718062.9	1.262	NO	21.83	50	17.339	1.042		100				922	558	6946096	5527486	7530.5	9904.8	400608.4	317454.5	1.0654	21.8	21.86	26-Jun-17	0.542986	H5-17-WDM-0398	1
100	PCB-151/135		1439888.7	1.253	NO	22.19	100	12.737	1.045		100				922	558	10199319	8103706	11057.5	14521.2	800736.2	639152.5	1.0829	22.16	22.22	26-Jun-17	0.542986	H5-17-WDM-0398	1
101	PCB-154		765059.8	1.278	NO	22.27	50	16.898	1.11		100				922	558	7253315	5740186	7863.6	10285.9	429231.2	335828.6	1.0869	22.24	22.31	26-Jun-17	0.542986	H5-17-WDM-0398	1
102	PCB-144		746262.6	1.257	NO	22.47	50	17.2	1.083		100	27-Jun-17	ES170627MB		922	558	7147800	5682812	7749.2	10183.1	415564.2	330698.4	1.0965	22.43	22.5	26-Jun-17	0.542986	H5-17-WDM-0398	1
103	* PCB-147/149		1343213.8	1.281	NO	22.67	100	16.94	0.974		100				4051	5624	12778472	9916038	3154.4	1763.2	754354.9	588858.8	1.1064	22.64	22.7	26-Jun-17	13:01:54	H5-17-WDM-0398	1
104	PCB-134/143		1200888.7	1.244	NO	22.82	100	12.239	0.871		100				4051	5624	8148176	6547766	2011.4	1164.3	665756.1	535132.6	1.1136	22.78	22.85	26-Jun-17	13:01:54	H5-17-WDM-0398	1
105	PCB-139/140		1295253.4	1.253	NO	22.98	100	16.259	0.94		100				4051	5624	11714544	9293732	2891.8	1652.5	720489.9	574763.5	1.1216	22.95	23.02	26-Jun-17	13:01:54	H5-17-WDM-0398	1
106	PCB-131		607266.3	1.363	NO	23.11	50	16.26	0.881		100				4051	5624	5696578	4526394	1406.2	804.9	350335.1	256931.2	0.8755	23.08	23.15	26-Jun-17	13:01:54	H5-17-WDM-0398	1
107	PCB-142		588370	1.168	NO	23.2	50	17.592	0.854		100				4051	5624	5576174	4408835	1376.5	783.9	316975.2	271394.8	0.8787	23.16	23.23	26-Jun-17	13:01:54	H5-17-WDM-0398	1
108	PCB-132		635308.7	1.215	NO	23.36	50	17.168	0.922		100				4051	5624	5983744	4903571	1477.1	871.9	348534.3	286774.3	0.8849	23.33	23.39	26-Jun-17	13:01:54	H5-17-WDM-0398	1
109	PCB-133		617484.1	1.274	NO	23.54	50	16.12	0.896		100				4051	5624	5576290	4451728	1376.5	791.6	345917	271567.1	0.8917	23.51	23.57	26-Jun-17	13:01:54	H5-17-WDM-0398	1
110	PCB-165		784440.6	1.265	NO	23.75	50	17.136	1.138		100				4051	5624	7508289	5967748	1853.5	1061.1	438150.9	346289.6	0.8998	23.72	23.79	26-Jun-17	13:01:54	H5-17-WDM-0398	1
111	PCB-146		694167.7	1.248	NO	23.89	50	17.708	1.007		100				4051	5624	6823411	5483501	1684.4	975	385337.8	308830	0.9048	23.85	23.92	26-Jun-17	13:01:54	H5-17-WDM-0398	1
112	PCB-161		813676.3	1.265	NO	23.95	50	16.355	1.181		100				4051	5624	7431813	5913064	1834.6	1051.4	454405.3	359271	0.9073	23.92	23.99	26-Jun-17	13:01:54	H5-17-WDM-0398	1
113	PCB-153/168		1561221.4	1.243	NO	24.21	100	15.257	1.133		100				4051	5624	13202489	10651925	3259.1	1894	865343.6	695877.8	0.9172	24.18	24.25	26-Jun-17	13:01:54	H5-17-WDM-0398	1
114	PCB-141		561701.7	1.253	NO	24.33	50	16.94	0.815		100				4051	5624	5292611	4239900	1306.5	753.9	312438.6	249263	0.9216	24.3	24.36	26-Jun-17	13:01:54	H5-17-WDM-0398	1
115	PCB-130		558732.8	1.281	NO	24.56	50	16.796	0.811		100				4051	5624	5271012	4124558	1301.2	733.4	313830.4	244902.3	0.9303	24.53	24.59	26-Jun-17	13:01:54	H5-17-WDM-0398	1
116	PCB-137/164		1369220.4	1.257	NO	24.72	100	9.563	0.993		100	27-Jun-17	ES170627MJ		4051	5624	7292252	5797943	1800.1	1030.9	762553.9	606666.5	0.9365	24.69	24.76	26-Jun-17	13:01:54	H5-17-WDM-0398	1
117	PCB-138/163/129		1933498.3	1.255	NO	24.89	150	13.699	0.935		100				4051	5624	14739299	11729552	3638.5	2085.7	1075956	857542.2	0.9427	24.85	24.92	26-Jun-17	13:01:54	H5-17-WDM-0398	1
118	PCB-160		857901.5	1.264	NO	24.99	50	16.235	1.245		100				4051	5624	7774901	6207509	1919.3	1103.8	478905.4	378996.1	0.9465	24.95	25.02	26-Jun-17	13:01:54	H5-17-WDM-0398	1
119	PCB-158		817496.5	1.264	NO	25.09	50	16.794	1.186		100				4051	5624	7665739	6086808	1892.3	1082.3	456449.8	361046.6	0.9502	25.05	25.12	26-Jun-17	13:01:54	H5-17-WDM-0398	1
120	PCB-128/166		1415666.9	1.269	NO	25.56	100	14.221	1.027		100				4051	5624	11259048	8868058	2779.3	1576.9	791719.9	623947	0.9683	25.53	25.6	26-Jun-17	13:01:54	H5-17-WDM-0398	1
121	PCB-159		833234.7	1.287	NO	26.02	50	16.232	1.209		100	27-Jun-17	ES170627MB		4051	5624	7610662	5997091	1878.7	1066.4	468866.6	364368.1	0.9857	25.99	26.06	26-Jun-17	13:01:54	H5-17-WDM-0398	1
122	PCB-162		813251.3	1.248	NO	26.17	50	16.816	1.18		100	27-Jun-17	ES170627MB		4051	5624	7593510	6049774	1874.5	1075.7	451561.6	361689.7	0.9913	26.14	26.2	26-Jun-17	13:01:54	H5-17-WDM-0398	1
123	PCB-167		780627.4	1.251	NO	26.42	47.637	16.722		1.401	95.3				4051	5624	7254400	5757304	1790.8	1023.7	433832.3	346795.1	1.0006	26.38	26.45	26-Jun-17	13:01:54	H5-17-WDM-0398	1
124	PCB-156/157		1547849.3	1.255	NO	27.06	94.28067	13.075		1.36	94.3				4051	5624	11261641	8928545	2780	1587.6	861314.7	686534.6	1.0006	27.02	27.09	26-Jun-17	13:01:54	H5-17-WDM-0398	1
125	PCB-169		684924.9	1.298	NO	28.72	47.15126	15.668		1.302	94.3				4051	5624	6061728	4632164	1496.4	823.7	386889.9	298035	1.0006	28.68	28.75	26-Jun-17	13:01:54	H5-17-WDM-0398	1
126	* PCB-188		733761.2	0.923	NO	23.51	42.44507	16.891		0.85	84.9				3009	1350	5949098	6502699	1977.4	4818.2	352210.3	381550.9	1.0007	23.47	23.54	26-Jun-17	13:01:54	H5-17-WDM-0398	1
127	PCB-179		685194.7	0.94	NO	23.72	50	17.091	0.908		100				3009	1350	5675198	6062247	1886.3	4491.9	332048.2	353146.4	1.0098	23.69	23.76	26-Jun-17	13:01:54	H5-17-WDM-0398	1
128	PCB-184		762084.7	0.938	NO	23.97	50	16.64	1.01		100				3009	1350	6139067	6503518	2040.5	4818.8	368944.9	393139.8	1.0203	23.93	24	26-Jun-17	13:01:54	H5-17-WDM-0398	1
129	PCB-176		715236.5	0.938	NO	24.18	50	17.314	0.948		100				3009	1350	5993932	6343283	1992.3	4700.1	346185.9	369050.6	1.0294	24.15	24.22	26-Jun-17	13:01:54	H5-17-WDM-0398	1
130	PCB-186		671253.2	0.928	NO	24.43	50	16.307	0.89		100				3009	1350	5269024	5755961	1751.3	4264.9	323112.4	348140.8	1.0399	24.39	24.46	26-Jun-17	13:01:54	H5-17-WDM-0398	1
131	PCB-178		503224.1	0.929	NO	25.09	50	17.137	0.667		100				3009	1350	4153048	4468078	1380.4	3310.7	242344	260880.1	1.0678	25.05	25.12	26-Jun-17	13:01:54	H5-17-WDM-0398	1
132	PCB-175		532692.8	0.919	NO	25.41	50	17.178	0.706		100				3009	1350	4382099	4803285	1456.5	3559	255095.3	277597.4	1.0818	25.38	25.45	26-Jun-17	13:01:54	H5-17-WDM-0398	1
133	PCB-187		627642	0.92	NO	25.56	50	16.58	0.832		100				3009	1350	4986284	5412403	1657.4	4010.4	300744.1	326897.9	1.0881	25.53	25.6	26-Jun-17	13:01:54	H5-17-WDM-0398	1
134	PCB-182		508135.2	0.943	NO	25.66	50	17.297	0.673		100				3009	1350	4266045	4503934	1418	3337.2	246629.6	261505.6	1.0923	25.63	25.69	26-Jun-17	13:01:54	H5-17-WDM-0398	1
135	PCB-183		508737.5	0.926	NO	25.87	50	18.214	0.674		100				3009	1350	4455868	4731395	1481.1	3505.8	244638.4	264099	1.1014	25.84	25.91	26-Jun-17	13:01:54	H5-17-WDM-0398	1
136	PCB-185		523922.6	0.929	NO	25.96	50	16.362	0.694		100				3009	1350	4128321	4428387	1372.2	3281.2	252319.2	271603.4	1.1049	25.92	25.99	26-Jun-17	13:01:54	H5-17-WDM-0398	1
137	PCB-174		472065	0.936	NO	26.02	50	17.087	0.626		100				3009	1350	3900236	4166658	1296.4	3087.3	228262	243803	1.1077	25.99	26.06	26-Jun-17	13:01:54	H5-17-WDM-0398	1
138	PCB-177		493734.1	0.942	NO	26.25	50	16.076	0.654		100				3009	1350	3850242	4103539	1279.8	3040.5	239505.5	254228.6	1.1175	26.22	26.29	26-Jun-17	13:01:54	H5-17-WDM-0398	1
139	PCB-181		504974.4	0.928	NO	26.47	50	16.503	0.669		100				3009	1350	4010922	4271373	1333.2	3164.9	243042.1	261932.3	0.8827	26.43	26.5	26-Jun-17	13:01:54	H5-17-WDM-0398	1
140	PCB-171/173		918110.4	0.934	NO	26.58	100	16.482	0.608		100				3009	1350	7307478	7842360	2428.9	5810.9	443348.4	474762	0.8866	26.55	26.61	26-Jun-17	13:01:54	H5-17-WDM-0398	1
141	PCB-172		467892.8	0.916	NO	27.39	50	16.651	0.62		100				3009	1350	3723970	4008803	1237.8	2970.4	223644.7	244248	0.9134	27.35	27.42	26-Jun-17	13:01:54	H5-17-WDM-0398	1
142	PCB-192		557269.9	0.928	NO	27.53	50	17.169	0.738		100				3009	1350	4604613	4957308	1530.5	3673.2	268190.5	289079.4	0.9183	27.5	27.57	26-Jun-17	13:01:54	H5-17-WDM-0398	1
143	PCB-180/193		1088371.7	0.935	NO	27.7	100	13.268	0.721		100				3009	1350	6978733	7475510	2319.6	5539	525967.1	562404.6	0.9238	27.66	27.73	26-Jun-17	13:01:54	H5-17-WDM-0398	1
144	PCB-191		618317	0.936	NO	27.91	50	16.513	0.819		100				3009	1350	4936476	5229690	1640.8	3875	298947.8	319369.2	0.9309	27.88	27.94	26-Jun-17	13:01:54	H5-17-WDM-0398	1
145	PCB-170		454918.3	0.926	NO	28.4	50	16.359	0.603		100				3009	1350	3577994	3851778	1189.3	2854	218711.9	236206.4	0.9474	28.37	28.44	26-Jun-17	13:01:54	H5-17-WDM-0398	1
146	PCB-190		653986.8	0.931	NO	28.68	50	14.853	0.867		100				3009	1350	4683197	5051148	1556.6	3742.7	315313.5	338673.3	0.9567	28.65	28.72	26-Jun-17	13:01:54	H5-17-WDM-0398	1
147	* PCB-189		594325.5	1.037	NO	30	51.19687	16.665		1.179	102.4				3037	3644	5043166	4879841	1660.7	1339.3	302616	291709.5	1.0005	29.96	30.03	26-Jun-17	13:01:54	H5-17-WDM-0398	1
148	* PCB-202		1228432.6	0.889	NO	26.28	74.21318	16.323		1.025	99				1343	952	9437738	10751608	7027.2	11298.8	578190.9	650241.7	1	26.25	26.32	26-Jun-17	13:01:54	H5-17-WDM-0398	1
149	PCB-201		1126192.6	0.889	NO	26.76	75	16.699	1.24		100				1343	952	8849704	9997871	6589.3	10506.7	529961.3	596231.4	1.0181	26.73	26.79	26-Jun-17	13:01:54	H5-17-WDM-0398	1
150	PCB-204		1232988.3	0.896	NO	27.11	75	16.791	1.357		100				1343	952	9783990	10927822	7285	11484	582682.5	650305.8	1.0313	27.07	27.14	26-Jun-17	0.542986	H5-17-WDM-0398	1
151	PCB-197		1133834.8	0.897	NO	27.24	75	16.965	1.248		100				1343	952	9096013	10048217	6772.7	10559.6	536164	597670.8	1.0363	27.2	27.27	26-Jun-17	0.542986	H5-17-WDM-0398	1
152	PCB-200		1175275.8	0.905	NO	27.32	75	16.36	1.294		100				1343	952	9133724	10109122	6800.8	10623.6	558298.1	616977.8	1.0394	27.29	27.35	26-Jun-17	0.542986	H5-17-WDM-0398	1
153	PCB-198/199		1586657.4	0.893	NO	28.72	150	14.594	0.873		100				1343	952	10926640	12249041	8135.8	12872.4	748688	837969.4	0.915	28.68	28.75	26-Jun-17	0.542986	H5-17-WDM-0398	1
154	PCB-196		745622.9	0.906	NO	29.06	75	16.895	0.821		100				1343	952	5987633	6653783	4458.3	6992.4	354402.3	391220.6	0.926	29.03	29.09	26-Jun-17	13:01:54	H5-17-WDM-0398	1
155	PCB-203		850990.8	0.901	NO	29.18	75	15.934	0.937		100				1343	952	6425168	7105591	4784.1	7467.2	403248.5	447742.4	0.9297	29.14	29.21	26-Jun-17	13:01:54	H5-17-WDM-0398	1
156	* PCB-195		610322.8	0.887	NO	29.9	75	16.301	0.672		100				2878	2899	4675759	5150683	1624.6	1776.6	286846.8	323476	0.9527	29.87	29.93	26-Jun-17	13:01:54	H5-17-WDM-0398	1
157	PCB-194		584533.8	0.909	NO	31.12	75	15.899	0.644		100				2878	2899	4425651	4875365	1537.7	1681.7	278361.8	306172	0.9917	31.09	31.16	26-Jun-17	13:01:54	H5-17-WDM-0398	1
158	PCB-205		650080.3	0.901	NO	31.4	70.95046	15.207		1.135	94.6				2878	2899	4685449	5226757	1628	1802.9	308101.6	341978.8	1.0005	31.37	31.43	26-Jun-17	13:01:54	H5-17-WDM-0398	1
159	* PCB-208		602761.3	0.792	NO	29.74	72.65786	16.883		0.86	96.9				1642	2834	4496854	5639288	2738.7	1990.1	266350.2	336411.1	1.0006	29.7	29.77	26-Jun-17	13:01:54	H5-17-WDM-0398	1
160	PCB-207		572745.7	0.809	NO	30.21	75	16.523	0.979		100				1642	2834	4232321	5224103	2577.5	1843.5	256151.7	316594	1.0165	30.18	30.24	26-Jun-17	13:01:54	H5-17-WDM-0398	1
161	PCB-206		351828.5	0.798	NO	32.49	72.47198	14.387		0.816	96.6				1642	2834	2246910	2803783	1368.4	989.4	156171.8	195656.7	1.0005	32.46	32.53	26-Jun-17	13:01:54	H5-17-WDM-0398	1
162	* PCB-209		457399.2	1.226	NO	33.64	78.83384	12.859		1.061	105.1				229	688	3239681	2642084	14171.2	3837.9	251938.8	205460.4	1.0005	33.6	33.67	26-Jun-17	13:01:54	H5-17-WDM-0398	1
163	13C-PCB-31		2436358.5	1.082	NO	15.77	106.1166	17.786		1.138	106.1				13262	3916	22518904	20901124	1698	5337.4	1266086	1170273	0.8677	15.74	15.81	26-Jun-17	13:01:54	H5-17-WDM-0398	1
164	13C-PCB-95		1379541.5	1.575	NO	19.1	96.97842	17.373		0.868	97				2140	1522	14658297	9216772	6850.6	6057.3	843721.4	535820.1	1.0923	19.07	19.14	26-Jun-17	13:01:54	H5-17-WDM-0398	1
165	13C-PCB-153		1245772.3	1.313	NO	24.2	103.2813	16.356		0.875	103.3				2249	1775	11567297	8784630	5142.7	4950.1	707238.1	538534.1	1.1809	24.16	24.23	26-Jun-17	13:01:54	H5-17-WDM-0398	1
166	13C-PCB-28		2318556	1.077	NO	15.96	99.5963	17.389		1.301	99.6				13262	3916	20907652	19338478	1576.5	4938.4	1202316	1116240	0.9417	15.92	15.99	26-Jun-17	13:01:54	H5-17-WDM-0398	1
167	13C-PCB-111		1874508	1.585	NO	22.01	97.45425	16.381		1.216	97.5				2140	1522	18825102	12038113	8797.9	7911.4	1149235	725273	1.0674	21.98	22.04	26-Jun-17	13:01:54	H5-17-WDM-0398	1
168	13C-PCB-178		1363192.3	1.048	NO	25.07	104.9944	16.79		1.206	105				2035	2264	11713050	11203123	5756.2	4948.7	697618	665574.3	1.0079	25.04	25.1	26-Jun-17	13:01:54	H5-17-WDM-0398	1
169	13C-PCB-1		2907553.6	3.224	NO	8.85	100.3529	19.82		0.901	100.4				2454	8853	43983720	13598292	17926.4	1536	2219212	688341.9	0.7483	8.81	8.88	26-Jun-17	13:01:54	H5-17-WDM-0398	1
170	13C-PCB-3		2788977.8	3.148	NO	10.38	97.45004	19.301		0.89	97.5				2454	8853	40854676	12968634	16651.1	1464.8	2116689	672289.1	0.8776	10.34	10.41	26-Jun-17	13:01:54	H5-17-WDM-0398	1
171	13C-PCB-4		2067761.6	1.627	NO	10.56	100.0038	18.945		0.643	100				4458	1622	24263126	14796481	5442.6	9123.3	1280691	787070.8	0.8929	10.52	10.59	26-Jun-17	13:01:54	H5-17-WDM-0398	1

172	13C-PCB-15		2365249.9	1.512	NO	14.24	103.1608	17.577		0.713	103.2
173	13C-PCB-19		1726028.1	1.035	NO	12.56	96.19238	18.296		0.558	96.2
174	13C-PCB-37		2308990.6	1.089	NO	18.18	103.2322	17.304		1.25	103.2
175	13C-PCB-54		2174601.1	0.805	NO	14.42	100.8546	18.447		1.205	100.9
176	13C-PCB-81		2325112.1	0.782	NO	21.78	100.6099	16.78		1.461	100.6
177	13C-PCB-77		2312663.3	0.78	NO	22.08	97.40444	16.97		1.501	97.4
178	13C-PCB-104		1990653.2	1.587	NO	17.49	102.5647	17.72		1.227	102.6
179	13C-PCB-123		1558697.1	1.633	NO	23.08	103.1824	17.188		0.955	103.2
180	13C-PCB-118		1504479.2	1.626	NO	23.25	102.1606	16.309		0.931	102.2
181	13C-PCB-114		1501581.3	1.66	NO	23.56	105.4759	16.885		0.9	105.5
182	13C-PCB-105		1552502.8	1.65	NO	23.9	104.0801	17.125		0.943	104.1
183	13C-PCB-126		1388183.3	1.641	NO	25.5	100.5263	16.565		0.873	100.5
184	13C-PCB-155		2021519.3	1.25	NO	20.49	100.7873	17.548		1.268	100.8
185	13C-PCB-167		1169664.4	1.31	NO	26.4	98.76994	16.794		1.1	98.8
186	13C-PCB-156/157		2414332.6	1.28	NO	27.04	201.4922	13.276		1.113	100.7
187	13C-PCB-169		1115677.6	1.286	NO	28.7	96.4021	16.363		1.075	96.4
188	13C-PCB-188		2033801.8	1.052	NO	23.49	106.0125	16.608		1.782	106
189	13C-PCB-189		984616.5	1.076	NO	29.98	97.19271	16.652		0.941	97.2
190	13C-PCB-202		1614903.1	0.915	NO	26.28	103.8809	16.492		1.444	103.9
191	13C-PCB-205		807264.7	0.962	NO	31.38	102.7785	15.122		1.251	102.8
192	13C-PCB-208		964637.8	0.725	NO	29.72	106.1059	16.894		1.448	106.1
193	13C-PCB-206		594936.5	0.709	NO	32.48	96.79026	14.292		0.979	96.8
194	13C-PCB-209		546848.9	1.166	NO	33.62	110.6716	12.607		0.787	110.7
195	13C-PCB-9		3215681.4	1.602	NO	11.82	100	18.744	32156.81		100
196	13C-PCB-52		1789357.3	0.779	NO	16.94	100	17.296	17893.57		100
197	13C-PCB-101		1581805	1.577	NO	20.62	100	17.174	15818.05		100
198	13C-PCB-138		1076573.7	1.3	NO	24.87	100	17.178	10765.74		100
199	13C-PCB-194		627850.6	0.955	NO	31.11	100	15.882	6278.506		100
200	Total MoCB-F1	10					124174.1		16.617		
201	Total DiCB-F1	8					20893.13		4.259		
202	Total DiCB-F2	6					27516.02		8.458		
203	Total TrCB-F1	1					24.99444				
204	Total TrCB-F2	7					417.4403		0.83		
205	Total TrCB-F3	17					115314.1		2.904		
206	Total TeCB-F2	1					53.5596				
207	Total TeCB-F3	13					1100		0.699		
208	Total TeCB-F4	26					317247.7		5.95		
209	Total PeCB-F3	2					97.6858		26.87		
210	Total PeCB-F4	20					29357.43		0.984		
211	Total PeCB-F5	31					580266.3		30.141		
212	Total HxCB-F4	10					785.0641		7.022		
213	Total HxCB-F5	36					309124.7		12.024		
214	Total HpCB-F5	29					186802.9		2.429		
215	Total HpCB-F6	1					51.19687				
216	Total OcCB-F5	14					2282.206		10.48		
217	Total OcCB-F6	7					179671.7		27.281		
218	Total NoCB-F6	4					1822.615		40.867		
219	Total DeCB-F7	1					78.83384				
220	Total 13C-MoCB-F1	2					197.803				
221	Total 13C-DiCB-F1	4					200.4784		16110.56		
222	Total 13C-DiCB-F2	1					103.1608				
223	Total 13C-TrCB-F1	1					96.19238				
224	Total 13C-TrCB-F3	3					308.9451				
225	Total 13C-TeCB-F2	1					100.8546				
226	Total 13C-TeCB-F3	6					102.7797		17893.57		
227	Total 13C-TeCB-F4	2					198.0143				
228	Total 13C-PeCB-F3	1					102.5647				
229	Total 13C-PeCB-F4	7					296.6297		5340.244		
230	Total 13C-PeCB-F5	5					515.4253				
231	Total 13C-HxCB-F4	1					100.7873				
232	Total 13C-HxCB-F5	15					621.3094		2258.53		
233	Total 13C-HpCB-F5	2					211.0069				
234	Total 13C-HpCB-F6	1					97.19271				
235	Total 13C-OcCB-F5	1					103.8809				
236	Total 13C-OcCB-F6	7					219.8372		3203.541		
237	Total 13C-NoCB-F6	2					202.8961				
238	Total 13C-DeCB-F7	1					110.6716				
239	Lockmass F1										
240	Lockmass F2										
241	Lockmass F3										
242	Lockmass F4										
243	Lockmass F5										
244	Lockmass F6										
245	Lockmass F7										

172	6627	1275	25026950	16435544	3776.5	12889.8	1423837	941412.6	1.2045	14.21	14.27	26-Jun-17	13:01:54	H5-17-WDM-0398	1
173	17890	4896	16063172	15416267	897.9	3148.6	877960.2	848067.9	1.0626	12.53	12.6	26-Jun-17	13:01:54	H5-17-WDM-0398	1
174	13262	3916	20829826	19271860	1570.7	4921.4	1203745	1105245	1.0729	18.15	18.21	26-Jun-17	13:01:54	H5-17-WDM-0398	1
175	630	530	17892258	22216758	28382.2	41955.6	969907.1	1204694	0.8511	14.39	14.46	26-Jun-17	13:01:54	H5-17-WDM-0398	1
176	1840	2177	17119852	21838002	9303.8	10029.3	1020230	1304882	1.0563	21.75	21.82	26-Jun-17	13:01:54	H5-17-WDM-0398	1
177	1840	2177	17203078	21973326	9349.1	10091.5	1013762	1298901	1.0705	22.04	22.11	26-Jun-17	13:01:54	H5-17-WDM-0398	1
178	541	723	21637574	13661061	40016.4	18889.7	1221060	769593.4	1.0321	17.45	17.52	26-Jun-17	13:01:54	H5-17-WDM-0398	1
179	3633	1804	16614278	10145358	4573.3	5624.2	966614.4	592082.7	1.1193	23.05	23.11	26-Jun-17	13:01:54	H5-17-WDM-0398	1
180	3633	1804	15193904	9351960	4182.3	5184.4	931650.4	572828.8	1.1272	23.21	23.28	26-Jun-17	13:01:54	H5-17-WDM-0398	1
181	3633	1804	15821791	9535203	4355.1	5286	937013.6	564567.8	0.9472	23.52	23.59	26-Jun-17	13:01:54	H5-17-WDM-0398	1
182	3633	1804	16552209	10007294	4556.2	5547.7	966538	585964.8	0.961	23.87	23.94	26-Jun-17	13:01:54	H5-17-WDM-0398	1
183	3633	1804	14287226	8701701	3932.7	4823.9	862494.2	525689.1	1.0251	25.46	25.53	26-Jun-17	13:01:54	H5-17-WDM-0398	1
184	780	828	19710308	15768211	25276.8	19051.8	1123212	898307.8	0.9937	20.46	20.52	26-Jun-17	13:01:54	H5-17-WDM-0398	1
185	2249	1775	11138956	8587627	4952.3	4839.1	663262.1	506402.3	1.0614	26.37	26.43	26-Jun-17	13:01:54	H5-17-WDM-0398	1
186	2249	1775	17995250	14048903	8000.5	7916.5	1355468	1058865	1.0872	27.01	27.07	26-Jun-17	13:01:54	H5-17-WDM-0398	1
187	2249	1775	10267797	7953825	4565	4481.9	627514.6	488163	1.1539	28.67	28.73	26-Jun-17	13:01:54	H5-17-WDM-0398	1
188	2035	2264	17319238	16521777	8511.3	7298	1042836	990965.9	0.9445	23.46	23.53	26-Jun-17	13:01:54	H5-17-WDM-0398	1
189	3272	4055	8496827	7937529	2596.8	1957.4	510245.3	474371.2	0.9638	29.95	30.02	26-Jun-17	13:01:54	H5-17-WDM-0398	1
190	1845	2020	12722704	13837761	6894.1	6851.2	771470.4	843432.7	1.0568	26.25	26.32	26-Jun-17	13:01:54	H5-17-WDM-0398	1
191	2788	3937	5984557	6241732	2146.8	1585.5	395762.4	411502.3	1.0089	31.35	31.42	26-Jun-17	13:01:54	H5-17-WDM-0398	1
192	2280	2669	6850493	9453499	3004.7	3541.9	405504.3	559133.4	0.9554	29.69	29.75	26-Jun-17	13:01:54	H5-17-WDM-0398	1
193	2280	2669	3527428	4975064	1547.1	1864	246815.8	348120.8	1.044	32.44	32.51	26-Jun-17	13:01:54	H5-17-WDM-0398	1
194	311	375	3710997	3175104	11940.8	8472.3	294359.5	252489.4	1.0807	33.59	33.65	26-Jun-17	13:01:54	H5-17-WDM-0398	1
195	4458	1622	37113844	22994800	8325.2	14178.2	1980066	1235616	0.4754	11.79	11.86	26-Jun-17	13:01:54	H5-17-WDM-0398	1
196	990	954	13552293	17452572	13691	18292.6	783565.3	1005792	0.6813	16.91	16.98	26-Jun-17	13:01:54	H5-17-WDM-0398	1
197	2140	1522	16622445	10599597	7768.5	6966.1	967899.2	613905.8	0.8291	20.59	20.66	26-Jun-17	13:01:54	H5-17-WDM-0398	1
198	2249	1775	10451480	8027674	4646.6	4523.5	608423.1	468150.6	0	24.84	24.91	26-Jun-17	13:01:54	H5-17-WDM-0398	1
199	2788	3937	4870513	5139927	1747.1	1305.6	306675.7	321174.8	1.2507	31.07	31.14	26-Jun-17	13:01:54	H5-17-WDM-0398	1
200	1512		31118170				1613428					26-Jun-17	13:01:54	H5-17-WDM-0398	1
201	2054		50184803				2693428					26-Jun-17	0.542986	H5-17-WDM-0398	1
202	1767		35551656				2129296					26-Jun-17	0.542986	H5-17-WDM-0398	1
203	537		4154732				228969.2					26-Jun-17	0.542986	H5-17-WDM-0398	1
204	499		25659642				1502974					26-Jun-17	0.542986	H5-17-WDM-0398	1
205	1560		74475948				4517919					26-Jun-17	13:01:54	H5-17-WDM-0398	1
206	544		9400649				510507.3					26-Jun-17	13:01:54	H5-17-WDM-0398	1
207	644		1.14E+08				7139222					26-Jun-17	13:01:54	H5-17-WDM-0398	1
208	1		1.19E+08				7649575					26-Jun-17	13:01:54	H5-17-WDM-0398	1
209	677		22057590				1245870					26-Jun-17	13:01:54	H5-17-WDM-0398	1
210	737215		1.94E+08				16567771					26-Jun-17	13:01:54	H5-17-WDM-0398	1
211	1623		99862795				6146173					26-Jun-17	13:01:54	H5-17-WDM-0398	1
212	922		78410199				4760940					26-Jun-17	13:01:54	H5-17-WDM-0398	1
213	4051		1.92E+08				12593106					26-Jun-17	13:01:54	H5-17-WDM-0398	1
214	3009		1.04E+08				6324905					26-Jun-17	13:01:54	H5-17-WDM-0398	1
215	3037		5970303				361563.9					26-Jun-17	13:01:54	H5-17-WDM-0398	1
216	1343		69659294				4292598					26-Jun-17	13:01:54	H5-17-WDM-0398	1
217	2878		14298762				910748.6					26-Jun-17	13:01:54	H5-17-WDM-0398	1
218	1642		10979129				678805.9					26-Jun-17	13:01:54	H5-17-WDM-0398	1
219	229		3241268				252124.5					26-Jun-17	13:01:54	H5-17-WDM-0398	1
220	2454		84920732				4340085					26-Jun-17	13:01:54	H5-17-WDM-0398	1
221	4458		61464680				3265720					26-Jun-17	13:01:54	H5-17-WDM-0398	1
222	6627		25026950				1423837					26-Jun-17	13:01:54	H5-17-WDM-0398	1
223	17890		19413015				1072628					26-Jun-17	13:01:54	H5-17-WDM-0398	1
224	13262		64854821				3710495					26-Jun-17	13:01:54	H5-17-WDM-0398	1
225	630		17892258				969907.1					26-Jun-17	13:01:54	H5-17-WDM-0398	1
226	990		13928512				805575.3					26-Jun-17	13:01:54	H5-17-WDM-0398	1
227	1840		35072048				2078328					26-Jun-17	13:01:54	H5-17-WDM-0398	1
228	541		21639808				1221196					26-Jun-17	13:01:54	H5-17-WDM-0398	1
229	2140		50230183				2968113					26-Jun-17	13:01:54	H5-17-WDM-0398	1
230	3633		79412343				4728405					26-Jun-17	13:01:54	H5-17-WDM-0398	1
231	780		19813645				1129614					26-Jun-17	13:01:54	H5-17-WDM-0398	1
232	2249		61826807				3988188					26-Jun-17	13:01:54	H5-17-WDM-0398	1
233	2035		29513261				1771458					26-Jun-17	13:01:54	H5-17-WDM-0398	1
234	3272		9035911				547173.3					26-Jun-17	13:01:54	H5-17-WDM-0398	1
235	1845		12811998				776794.3					26-Jun-17	13:01:54	H5-17-WDM-0398	1
236	2788		11216522				729005.3					26-Jun-17	13:01:54	H5-17-WDM-0398	1
237	2280		10411360				654310.7					26-Jun-17	13:01:54	H5-17-WDM-0398	1
238	311		3712116				294465.9					26-Jun-17	13:01:54	H5-17-WDM-0398	1
239	2237772		0				0					26-Jun-17	13:01:54	H5-17-WDM-0398	1
240	1524418		0				0					26-Jun-17	13:01:54	H5-17-WDM-0398	1
241	4306146		0				0					26-Jun-17	13:01:54	H5-17-WDM-0398	1
242	4826498		0				0					26-Jun-17	13:01:54	H5-17-WDM-0398	1
243	917938		0				0					26-Jun-17	13:01:54	H5-17-WDM-0398	1
244	658077		0				0					26-Jun-17	13:01:54	H5-17-WDM-0398	1
245	622184		0				0					26-Jun-17	13:01:54	H5-17-WDM-0398	1

Sample Name: 5-170627A01   Sample ID: H5-17-WDM-0401

	Target Analyte	#Hom	Resp	Ra	Ra fail=YES	RT	Conc.	H/A	ical RRF	User RF	%Rec	Mod.Date	Mod.Comment	Code Comments	Noise 1	Noise 2	Ion1 Ht	Ion2 Ht	Ion1 s/n	Ion2 s/n	Ion1 Area	Ion2 Area	RRT	RT LCL	RT UCL	Acq.Date	Acq.Time	ID	Spl Size
1	* PCB-1		1053654.2	3.409	NO	8.88	28.60106	19.834		0.874	114.4				1486	1226	16158546	4735714	10877	3862	814669.1	238985.1	1.0019	8.85	8.91	27-Jun-17	12:25:45	H5-17-WDM-0401	1
2	PCB-2		991962.8	3.438	NO	10.29	25	18.834	0.971		100				1486	1226	14472442	4163789	9742	3395.6	768426.3	223536.5	0.989	10.26	10.33	27-Jun-17	12:25:45	H5-17-WDM-0401	1
3	PCB-3		1017723.4	3.36	NO	10.41	28.78919	19.1		0.894	115.2				1486	1226	14980530	4487096	10084.1	3659.2	784312.3	233411.2	1	10.38	10.44	27-Jun-17	12:25:45	H5-17-WDM-0401	1
4	*PCB-4		666982.1	1.321	NO	10.59	25.0535	19.358		0.901	100.2				2223	2161	7347151	5529776	3304.8	2558.9	379547	287435.1	1.0016	10.56	10.62	27-Jun-17	12:25:45	H5-17-WDM-0401	1
5	PCB-10		964618.2	1.335	NO	10.71	25	18.495	1.214		100				2223	2161	10199657	7560648	4587.9	3498.6	551486.3	413131.9	1.0125	10.67	10.74	27-Jun-17	12:25:45	H5-17-WDM-0401	1
6	PCB-9		964621.2	1.329	NO	11.86	25	19.014	1.214		100				2223	2161	10467607	7861063	4708.4	3637.6	550515.1	414106.1	1.1213	11.82	11.89	27-Jun-17	12:25:45	H5-17-WDM-0401	1
7	PCB-7		969307.7	1.329	NO	11.95	25	18.212	1.22		100				2223	2161	10074676	7667269	4531.7	3548	553195.1	416112.6	1.1306	11.92	11.99	27-Jun-17	12:25:45	H5-17-WDM-0401	1
8	PCB-6		1007642.4	1.326	NO	12.12	25	18.862	1.269		100				2223	2161	10833218	8176830	4872.9	3783.8	574341.9	433300.5	1.1461	12.09	12.15	27-Jun-17	12:25:45	H5-17-WDM-0401	1
9	PCB-5		841158.6	1.317	NO	12.32	25	19.999	1.059		100				2223	2161	9562579	7217236	4301.3	3339.7	478163.3	362995.4	1.1648	12.28	12.35	27-Jun-17	12:25:45	H5-17-WDM-0401	1
10	PCB-8		1077299.2	1.34	NO	12.4	25	17.294	1.356		100				2223	2161	10669979	7944391	4799.4	3676.2	616959	460340.2	1.1726	12.37	12.43	27-Jun-17	12:25:45	H5-17-WDM-0401	1
11	* PCB-14		1041143.6	1.587	NO	13.37	25	18.464	1.311		100				4184	1331	11792228	7446791	2818.3	5594.7	638658.1	402485.6	0.9379	13.34	13.41	27-Jun-17	12:25:45	H5-17-WDM-0401	1
12	PCB-11		982450.3	1.557	NO	13.9	25	17.413	1.237		100				4184	1331	10416133	6634698	2489.5	4984.6	598179.4	384270.9	0.9747	13.86	13.93	27-Jun-17	12:25:45	H5-17-WDM-0401	1
13	PCB-13/12		1906606.7	1.566	NO	14.08	50	13.954	1.2		100				4184	1331	16238772	10488961	3881.1	7880.3	1163721	742885.8	0.9874	14.04	14.11	27-Jun-17	12:25:45	H5-17-WDM-0401	1
14	PCB-15		1061548.1	1.571	NO	14.27	25.93256	17.987		1.204	103.7				4184	1331	11665887	7392483	2788.1	5553.9	648575.1	412973	1.0011	14.24	14.31	27-Jun-17	12:25:45	H5-17-WDM-0401	1
15	* PCB-19		602769.5	1.084	NO	12.6	25.89767	18.734		1.03	103.6				1365	1508	5875178	5438344	4305.7	3606.1	313606.1	289163.4	1.0013	12.56	12.63	27-Jun-17	12:25:45	H5-17-WDM-0401	1
16	* PCB-30/18		1117334.9	1.057	NO	13.68	50	13.824	0.825		100				885	795	7936081	7563571	8966	9518.7	574094.3	543240.7	1.0878	13.65	13.72	27-Jun-17	12:25:45	H5-17-WDM-0401	1
17	PCB-17		444901.7	1.076	NO	13.96	25	17.976	0.657		100				885	795	4144439	3865956	4682.3	4865.3	230559.9	214341.9	1.11	13.93	14	27-Jun-17	12:25:45	H5-17-WDM-0401	1
18	PCB-27		673437.9	1.03	NO	14.08	25	17.782	0.994		100				885	795	6076162	5922672	6864.7	7453.6	341697	331740.9	1.1191	14.04	14.11	27-Jun-17	12:25:45	H5-17-WDM-0401	1
19	PCB-24		638551.6	1.039	NO	14.18	25	18.219	0.943		100				885	795	5927430	5649292	6696.7	7109.6	325336.9	313214.8	1.1269	14.14	14.21	27-Jun-17	12:25:45	H5-17-WDM-0401	1
20	PCB-16		399933.1	1.053	NO	14.24	25	17.482	0.591		100				885	795	3585452	3473457	4050.8	4371.3	205089.9	194843.2	1.1321	14.21	14.28	27-Jun-17	12:25:45	H5-17-WDM-0401	1
21	PCB-32		750296.5	1.077	NO	14.54	25	18.066	1.108		100				885	795	7029636	6505517	7941.9	8187.1	389118.7	361177.8	1.1556	14.5	14.57	27-Jun-17	12:25:45	H5-17-WDM-0401	1
22	* PCB-34		775944.4	0.961	NO	15.23	25	18.177	1.146		100				1252	1681	6910404	7190920	5518.5	4278.3	380173.8	395770.7	0.8363	15.2	15.26	27-Jun-17	12:25:45	H5-17-WDM-0401	1
23	PCB-23		797766	1.004	NO	15.33	25	18.094	1.178		100				1252	1681	7231366	7187649	5774.8	4276.3	399645.1	398121	0.8417	15.3	15.36	27-Jun-17	12:25:45	H5-17-WDM-0401	1
24	PCB-29/26		1360865.3	0.982	NO	15.51	50	16.528	1.005		100				1252	1681	11141762	11416243	8897.5	6792.1	674116.1	686749.2	0.8517	15.48	15.54	27-Jun-17	12:25:45	H5-17-WDM-0401	1
25	PCB-25		860869.4	1.003	NO	15.64	25	16.395	1.271		100				1252	1681	7067456	7120973	5643.9	4236.7	431068.6	429800.8	0.8589	15.61	15.68	27-Jun-17	12:25:45	H5-17-WDM-0401	1
26	PCB-31		807844.7	0.982	NO	15.82	25	17.689	1.193		100				1252	1681	7079784	7239789	5653.7	4307.3	400246.7	407598	0.8689	15.79	15.86	27-Jun-17	12:25:45	H5-17-WDM-0401	1
27	PCB-28/20		1505912.6	0.983	NO	16.01	50	15.098	1.112		100				1252	1681	11268967	11310416	8999.1	6729.2	746397.7	759514.9	0.8788	15.97	16.04	27-Jun-17	12:25:45	H5-17-WDM-0401	1
28	PCB-21/33		1701050.8	0.98	NO	16.12	50	14.97	1.256		100				1252	1681	12606361	12917039	10067.1	7685.1	842097.4	858953.4	0.8851	16.09	16.15	27-Jun-17	12:25:45	H5-17-WDM-0401	1
29	PCB-22		765397.6	0.968	NO	16.37	25	17.67	1.13		100				1252	1681	6651989	6833835	5312.1	4065.8	376467.1	388930.4	0.8987	16.33	16.4	27-Jun-17	12:25:45	H5-17-WDM-0401	1
30	PCB-36		902478.5	0.979	NO	17.19	25	15.624	1.333		100				1252	1681	6975157	7121081	5570.2	4236.7	446439	456039.5	0.9439	17.16	17.23	27-Jun-17	12:25:45	H5-17-WDM-0401	1
31	PCB-39		759748.7	0.954	NO	17.41	25	16.841	1.122		100				1252	1681	6247908	6511748	4989.4	3874.2	370994.1	388754.6	0.9557	17.37	17.44	27-Jun-17	12:25:45	H5-17-WDM-0401	1
32	PCB-38		837025.9	0.967	NO	17.74	25	17.427	1.236		100				1252	1681	7173042	7461572	5728.2	4439.3	411607.7	425418.2	0.9738	17.7	17.77	27-Jun-17	12:25:45	H5-17-WDM-0401	1
33	PCB-35		772419.5	0.959	NO	18	25	16.974	1.14		100	28-Jun-17	ES170628MB		1252	1681	6418434	6664184	5125.6	3964.9	378136.3	394283.3	0.9882	17.97	18.03	27-Jun-17	12:25:45	H5-17-WDM-0401	1
34	PCB-37		786287.7	0.985	NO	18.23	27.38717	16.949		0.909	109.5				1252	1681	6614231	6683509	5281.9	3976.4	390246.2	396041.5	1.0009	18.2	18.26	27-Jun-17	12:25:45	H5-17-WDM-0401	1
35	* PCB-54		1537169	0.8	NO	14.45	53.73507	17.903		0.991	107.5				574	875	12229344	15370916	21311	17565	683087.8	854081.3	1.0011	14.42	14.49	27-Jun-17	12:25:45	H5-17-WDM-0401	1
36	* PCB-50/53		2050672.1	0.67	NO	15.68	100	17.711	0.664		100				612	1058	14567862	21624134	23792.3	20445.3	822536.4	1228136	1.0857	15.64	15.71	27-Jun-17	12:25:45	H5-17-WDM-0401	1
37	PCB-45/51		1959300.7	0.669	NO	16.09	100	14.391	0.635		100				612	1058	11302107	16996198	18458.6	16069.6	785345.8	1173955	1.1143	16.05	16.12	27-Jun-17	12:25:45	H5-17-WDM-0401	1
38	PCB-46		796605.1	0.675	NO	16.25	50	17.759	0.516		100				612	1058	5701496	8390942	9311.7	7933.5	321041.7	475563.4	1.1257	16.22	16.29	27-Jun-17	12:25:45	H5-17-WDM-0401	1
39	PCB-52		1094338.1	0.663	NO	16.99	50	16.936	0.709		100				612	1058	7389176	10916847	12068	10321.7	436292.4	658045.7	1.177	16.96	17.03	27-Jun-17	12:25:45	H5-17-WDM-0401	1
40	PCB-73		1247493.7	0.665	NO	17.06	50	19.351	0.808		100				612	1058	9638588	14477531	15741.8	13688.3	498089.8	749403.9	1.1816	17.03	17.09	27-Jun-17	12:25:45	H5-17-WDM-0401	1
41	PCB-43		947942.2	0.676	NO	17.13	50	16.721	0.614		100				612	1058	6395750	9546821	10445.6	9026.4	382495	565447.2	1.1861	17.09	17.16	27-Jun-17	12:25:45	H5-17-WDM-0401	1
42	PCB-69/49		2429596.7	0.67	NO	17.24	100	12.744	0.787		100				612	1058	12419651	18519086	20283.8	17509.5	974586.2	1455011	1.1941	17.21	17.27	27-Jun-17	12:25:45	H5-17-WDM-0401	1
43	PCB-48		997144.8	0.669	NO	17.42	50	17.724	0.646		100				612	1058	7080756	10580315	11564.3	10003.5	399501.3	597643.4	1.2067	17.39	17.46	27-Jun-17	12:25:45	H5-17-WDM-0401	1
44	PCB-44/47/65		3240572.5	0.676	NO	17.57	150	16.75	0.7		100				612	1058	21894120	31916966	35757.5	30177	1307090	1933483	1.2169	17.54	17.6	27-Jun-17	12:25:45	H5-17-WDM-0401	1
45	PCB-59/62/75		3984396.3	0.679	NO	17.74	150	16.682	0.861		100				612	1058	26887456	39227096	43912.6	37088.6	1611735	2372662	1.2284	17.7	17.77	27-Jun-17	12:25:45	H5-17-WDM-0401	1
46	PCB-42		927181.8	0.673	NO	17.85	50	17.808	0.601		100				612	1058	6640350	9875486	10845	9337.1	372891.2	554290.7	1.2364	17.82	17.88	27-Jun-17	12:25:45	H5-17-WDM-0401	1
47	PCB-41/71/40		2969059.8	0.667	NO	18.11	150	11.459	0.641		100				612	1058	13610516	20468492	22228.7	19352.7	1187798	1781262	1.2546	18.08	18.15	27-Jun-17	12:25:45	H5-17-WDM-0401	1
48	PCB-64		1431547.3	0.678	NO	18.25	50	16.913	0.928		100				612	1058	9782629	14350941	15977	13568.6	578400.8	853146.4	1.2637	18.21	18.28	27-Jun-17	0.517882	H5-17-WDM-0401	1
49	* PCB-72		1301811.9	0.666	NO	18.65	50	17.548	0.844		100				1	779	9131999	13651128	9131999	17530.7	520415.8	781396.2	0.8553	18.61	18.68	27-Jun-17	0.517882	H5-17-WDM-0401	1
50	PCB-68		1539667.8	0.671	NO	18.81	50	16.803	0.998		100				1	779	10391522	15419132	10391522	19801.1	618436.4	921231.4	0.8628	18.77	18.84	27-Jun-17	0.517882	H5-17-WDM-0401	1
51	PCB-57		1334508.9	0.67	NO	19.04	50	16.736	0.865		100				1	779	8961789	13522616	8961789	17365.6	535469.3	799039.6	0.8733	19	19.07	27-Jun-17	0.517882	H5-17-WDM-0401	1
52	PCB-58		1254993.6	0.672	NO	19.18	50	17.111	0.813		100				1	779	8627743	12671858	8627743	16273.1	504222	750771.6	0.8801	19.15	19.22	27-Jun-17	12:25:45	H5-17-WDM-0401	1
53	PCB-67		1492421.8	0.689	NO	19.27	50	16.218	0.967		100				1	779	9870185	14546044	9870185	18679.9	608590.8	883831	0.8838	19.23	19.3	27-Jun-17	12:25:45	H5-17-WDM-0401	1
54	PCB-63		1386527.6	0.664	NO	19.41	50	16.967	0.899		100				1	779	9386808	13950310	9386808	17914.9	553238.9	833288.6	0.8906	19.38	19.45	27-Jun-17	12:25:45	H5-17-WDM-0401	1
55	PCB-61/70/74/76		5261933.8	0.672	NO	19.59	200	10.549	0.853		100				1	779	22313478	33346580	22313478	42823.4	2115198	3146736	0.8988	19.56	19.63	27-Jun-17	12:25:45	H5-17-WDM-0401	1
56	PCB-66		1323377.5	0.665	NO	19.77	50	17.307	0.858		100				1	779	9151919	13722428	9151919	17622.2	528804.3	794573.2	0.9071	19.74	19.81	27-Jun-17	12:25:45	H5-17-WDM-0401	1
57	PCB-55		1290027.9	0.666	NO	19.89	50	16.514	0.836		100				1	779	8514078	12682318	8514078	16286.5	515567	774460.9	0.9123	19.85	19.92	27-Jun-17	12:25:45	H5-17-WDM-0401	1
58	PCB-56		1349651.1	0.672	NO	20.15	50	16.992	0.875		100				1	779	9214755	13764060	9214755	17675.7	542292.8	807358.4	0.9243	20.11	20.18	27-Jun-17	12:25:45	H5-17-WDM-0401	1
59	PCB-60		1305946.9	0.673	NO	20.28	50	16.674	0.846		100				1	779	8758898	12877801	8758898	16537.6	525289.1	780657.9	0.9303	20.25	20.31	27-Jun-17	12:25:45	H5-17-WDM-0401	1
60	PCB-80		1325924.5	0.674	NO	20.41	50	15.732	0.859		100				1	779	8401758	12555112	8401758	16123.2	534054.7	791869.8	0.9363	20.38	20.44	27-Jun-17	12:25:45	H5-17-WDM-0401	1
61	PCB-79		1469142.9	0.679	NO	21.26	50	15.948	0.952		100				1	779	9473464	13975034	9473464	17946.6	594012.3	875130.6	0.9753	21.23	21.29	27-Jun-17	12:25:45	H5-17-WDM-0401	1
62	PCB-78		1328354.8	0.675	NO	21.57	50	16.473	0.861		100				1	779	8815335	13081733	8815335	16799.5	535132.2	793222.6	0.9895	21.54	21.6	27-Jun-17	12:25:45	H5-17-WDM-0401	1
63	PCB-81		1339227.9	0.68	NO	21.81	45.20506	16.188		0.935	90.4				1	779	8778173	12980788	8778173	16669.8	542248.9	796979	1.0007	21.78	21.85	27-Jun-17	12:25:45	H5-17-WDM-0401	1
64	PCB-77		1367725.5	0.668	NO	22.13	47.54602	15.703		0.898	95.1				1	779	8600142	12787760	8600142	16421.9	547665.1	820060.4	1.0007	22.09	22.16	27-Jun-17	12:25:45	H5-17-WDM-0401	1
65	* PCB-104		1358744.5	1.597	NO	17.52	48.3549	17.534		1.102	96.7				661	735	14649860	9222804	22164.8	12552.7	835508.4	523236.2	1.0009	17.49	17.55	27-Jun-17	12:25:45	H5-17-WDM-0401	1
66	PCB-96		1277512.2	1.579	NO	17.77	50	16.864	1.113		100				661	735	13190397	8286497	19956.7	11278.3	782160.1	495352	1.0151	17.73	17.8	27-Jun-17	12:25:45	H5-17-WDM-0401	1
67	* PCB-103		1075131.6	1.587	NO	18.74	50	17.308	0.937		100				516	1943	11414184	7217716	22140.9	3714	659462.4	415669.2	1.0707	18.71	18.78	27-Jun-17	12:25:45	H5-17-WDM-0401	1
68	PCB-94		931747.1	1.582	NO	18.89	50	17.532	0.812		100				516	1943	10007814	6269325	19412.9	3226	570818.5	360928.6	1.0791	18.86	18.92	27-Jun-17	12:25:45	H5-17-WDM-0401	1
69	PCB-95		870428.6	1.567	NO	19.14	50	18.931	0.758		100				516	1943	10058373	6388110	19510.9	3287.1	531320.6	339108	1.0931	19.1	19.17	27-Jun-17	12:25:45	H5-17-WDM-0401	1
70	PCB-100/93/102/98		4035466.4	1.582	NO	19.33	200	5.432	0.879		100	28-Jun-17	ES170628MJ		516	1943	13433131	8460776	26057.2	4353.6	2472868	1562598	1.1043	19.3	19.36	27-Jun-17	12:25:45	H5-17-WDM-0401	1
71	PCB-88/91		1936396.1	1.579	NO	19.58	100	11.195	0.844		100				516	1943	13271927	8379569	25744.5	4311.9	1185482	750914.6	1.1183	19.54	19.61	27-Jun-17	12:25:45	H5-17-WDM-0401	1
72	PCB-84		814280.5	1.564	NO	19.74	50	17.27	0.71		100				516	1943	8578720	5508987	16640.8	2834.7	496740.1	317540.5	1.1277	19.71	19.77	27-Jun-17	12:25:45	H5-17-WDM-0401	1
73	PCB-89		918826.4	1.56	NO	20	50	16.642	0.801		100				516	1943	9318364	5934063	18075.5	3053.5	559932.4	358894.1	1.1426	19.97	20.03	27-Jun-17	12:25:45	H5-17-WDM-0401	1
74	PCB-121		1377517	1.575	NO	20.13	50	17.227	1.2		100				516	1943	14515810	9187460	28157.4	4727.6	842631	534886	1.1501	20.1	20.17	27-Jun-17	12:25:45	H5-17-WDM-0401	1
75	PCB-92		945582.4	1.586	NO	20.36	50	16.912	0.824		100				516	1943	9806827	6136050	19023	3157.4	579858.9	365723.6	1.1631	20.33	20.39	27-Jun-17	12:25:45	H5-17-WDM-0401	1
76	PCB-113/90/101		3168688.9	1.574	NO	20.65	150	14.155	0.92		100				516	1943	27429970	17404134	53207.9	8955.6	1937827	1230862	1.1799	20.62	20.69	27-Jun-17	12:25:45	H5-17-WDM-0401	1
77	PCB-83/99		1917192.8	1.582	NO	20.97	100	13.47	0.835		100				516	1943	15821590	9923488	30690.3	5106.3	1174561	742632.1	0.907	20.93	21	27-Jun-17	12:25:45	H5-17-WDM-0401	1
78	PCB-112		1244667.6	1.602	NO	21.06	50	15.887	1.085		100				516	1943	12175384	7559896	23617.5	3890.1	766396.2	478271.4	0.9113	21.03	21.1	27-Jun-17	12:25:45	H5-17-WDM-0401	1
79	PCB-109/119/86/97/125/87		6626756.8	1.578	NO	21.26	300	9.414	0.962		100				516	1943	38181816	24047710	74064	12374.2	4056005	2570752	0.9197	21.23	21.29	27-Jun-17	12:25:45	H5-17-WDM-0401	1
80	PCB-117/116/85/110/115		5957828.3	1.582	NO	21.67	250	5.697	1.038		100	28-Jun-17	ES170628MJ		516	1943	20797312	12994275	40342	6686.4	3650613	2307216	0.9374	21.63	21.7	27-Jun-17	12:25:45	H5-17-WDM-0401	1
81	PCB-82		818811.8	1.578	NO	21.93	50	16.373	0.714		100				516	1943	8206283	5228473	15918.3	2690.4	501202.7	317609	0.9487	21.9	21.96	27-Jun-17	12:25:45	H5-17-WDM-0401	1
82	PCB-111		1318643.7	1.586	NO	22.06	50	16.669	1.149		100				516	1943	13480228	8511484	26148.6	4379.7	808692.3	509951.4	0.9544	22.03	22.09	27-Jun-17	12:25:45	H5-17-WDM-0401	1
83	PCB-120		1353820.8	1.587	NO	22.3	50	16.237	1.18		100	28-Jun-17	ES170628MB		516	1943	13484739	8467596	26157.3	4357.1	830517.9	523302.8	0.965	22.27	22.34	27-Jun-17	12:25:45	H5-17-WDM-0401	1
84	* PCB-108/124		2613814.8	1.567	NO	22.93	100	16.181	1.139		100	28-Jun-17	ES170628MB		456659	1912	25821328	16428387	56.5	8594.4	1595790	1018025	0.9922	22.9	22.97	27-Jun-17	12:25:45	H5-17-WDM-0401	1
85	PCB-107		1154593	1.543	NO	23.06	50	18.47	1.006		100				456659	1912	12939499	8297983	28.3	4341	700557.9	454035.2	0.9979	23.03	23.1	27-Jun-17	12:25:45	H5-17-WDM-0401	1
86	PCB-123		1460365.3	1.564	NO	23.11	57.50332	14.561		1.121	115				456659	1912	12971837	8386738	28.4	4387.4	890876.9	569488.4	1	23.08	23.15	27-Jun-17	12:25:45	H5-17-WDM-0401	1
87	PCB-106		1220716.3	1.576	NO	23.2	50	16.849	1.064		100				456659	1912	12582488	8067186	27.6	4220.3	746770.6	473945.7	0.9965	23.16	23.23	27-Jun-17	12:25:45	H5-17-WDM-0401	1
88	PCB-118		1428814.3	1.551	NO	23.29	52.31433	15.749		1.244	104.6				456659	1912	13679583	8875988	30	4643.4	868607.1	560207.2	1.0007	23.26	23.33	27-Jun-17	12:25:45	H5-17-WDM-0401	1
89	PCB-122		1211944.8	1.566	NO	23.49	50	16.74	1.056		100				456659	1912	12383049	7892376	27.1	4128.8	739727.9	472216.9	0.9965	23.46	23.53	27-Jun-17	12:25:45	H5-17-WDM-0401	1
90	PCB-114		1325613.7	1.57	NO	23.59	48.67942	16.392		1.255	97.4				456659	1912	13274643	8501611	29.1	4447.5	809813.6	515800.1	1.0007	23.56	23.62	27-Jun-17	12:25:45	H5-17-WDM-0401	1
91	PCB-105		1334734.7	1.566	NO	23.94	49.61895	15.787		1.193	99.2				456659	1912	12859043	8265007	28.2	4323.8	814512.9	520221.7	1	23.9	23.97	27-Jun-17	12:25:45	H5-17-WDM-0401	1
92	PCB-127		1360632.9	1.562	NO	24.66	50	15.269	1.186		100				456659	1912	12666999	8129899	27.7	4253.1	829599.3	531033.6	1.0302	24.62	24.69	27-Jun-17	12:25:45	H5-17-WDM-0401	1
93	PCB-126		1294823.7	1.571	NO	25.53	49.761	14.905		1.253	99.5				456659	1912	11794279	7587487	25.8	3969.3	791292.3	503531.4	1	25.5	25.56	27-Jun-17	12:25:45	H5-17-WDM-0401	1
94	* PCB-155		1333210.3	1.28	NO	20.52	49.92216	16.545		1.067	99.8				815	842	12382687	9740729	15199.9	11568.7	748442.6	584767.7	1	20.49	20.56	27-Jun-17	12:25:45	H5-17-WDM-0401	1
95	PCB-152		1156661.6	1.258	NO	20.69	50	18.188	1.186		100				815	842	11718963	9244001	14385.1	10978.7	644314.4	512347.2	1.008	20.65	20.72	27-Jun-17	12:25:45	H5-17-WDM-0401	1
96	PCB-150		1348102.9	1.251	NO	20.75	50	16.333	1.383		100				815	842	12236194	9919815	15020	11781.4	749191.8	598911.1	1.0112	20.72	20.79	27-Jun-17	12:25:45	H5-17-WDM-0401	1
97	PCB-136		1179096.3	1.255	NO	20.98	50	17.129	1.209		100				815	842	11240179	8978262	13797.4	10663.1	656205.7	522890.6	1.0223	20.95	21.01	27-Jun-17	12:25:45	H5-17-WDM-0401	1
98	PCB-145		1154559	1.265	NO	21.13	50	17.182	1.184		100				815	842	11078683	8736899	13599.2	10376.5	644779.6	509779.5	1.0295	21.09	21.16	27-Jun-17	12:25:45	H5-17-WDM-0401	1
99	PCB-148		906739.9	1.242	NO	21.86	50	16.473	0.93		100				815	842	8274151	6618839	10156.6	7860.9	502293.9	404445.9	1.0653	21.83	21.9	27-Jun-17	0.517882	H5-17-WDM-0401	1
100	PCB-151/135		1907351.6	1.268	NO	22.21	100	11.872	0.978		100				815	842	12659370	9953481	15539.5	11821.3	1066282	841070.1	1.082	22.17	22.24	27-Jun-17	0.517882	H5-17-WDM-0401	1
101	PCB-154		882379.8	1.261	NO	22.3	50	17.915	0.905		100				815	842	8816205	7030601	10822	8350	492112.7	390267.1	1.0868	22.27	22.34	27-Jun-17	0.517882	H5-17-WDM-0401	1
102	PCB-144		881604	1.238	NO	22.5	50	17.277	0.904		100	28-Jun-17	ES170628MA		815	842	8426376	6727226	10343.4	7989.7	487726.8	393877.2	1.0963	22.47	22.53	27-Jun-17	0.517882	H5-17-WDM-0401	1
103	* PCB-147/149		1829239.9	1.266	NO	22.69	100	16.528	0.938		100				1564638	723774	16894906	13527930	10.8	18.7	1022172	807067.5	1.1054	22.65	22.72	27-Jun-17	12:25:45	H5-17-WDM-0401	1
104	PCB-134/143		1667980.3	1.245	NO	22.85	100	11.848	0.855		100				1564638	723774	10959293	8790947	7	12.1	924990.5	742989.8	1.1134	22.82	22.88	27-Jun-17	12:25:45	H5-17-WDM-0401	1
105	PCB-139/140		1855347.6	1.27	NO	23	100	15.535	0.951		100				1564638	723774	16128535	12783287	10.3	17.7	1038174	817173.6	1.1206	22.97	23.03	27-Jun-17	12:25:45	H5-17-WDM-0401	1
106	PCB-131		837054.8	1.264	NO	23.13	50	16.904	0.858		100				1564638	723774	7898802	6258132	5	8.6	467282.6	369772.2	0.8751	23.1	23.16	27-Jun-17	12:25:45	H5-17-WDM-0401	1
107	PCB-142		836667.1	1.281	NO	23.23	50	16.478	0.858		100				1564638	723774	7741524	6065626	4.9	8.4	469815.6	366851.5	0.8788	23.2	23.26	27-Jun-17	12:25:45	H5-17-WDM-0401	1
108	PCB-132		873175.1	1.263	NO	23.38	50	16.288	0.896		100				1564638	723774	7938624	6350170	5.1	8.8	487389.4	385785.7	0.8844	23.34	23.41	27-Jun-17	12:25:45	H5-17-WDM-0401	1
109	PCB-133		868127.2	1.263	NO	23.57	50	16.448	0.89		100				1564638	723774	7968983	6376387	5.1	8.8	484499.3	383627.9	0.8918	23.54	23.61	27-Jun-17	12:25:45	H5-17-WDM-0401	1
110	PCB-165		1107487.6	1.249	NO	23.79	50	16.319	1.136		100				1564638	723774	10038245	7998531	6.4	11.1	615142.4	492345.2	0.8999	23.75	23.82	27-Jun-17	12:25:45	H5-17-WDM-0401	1
111	PCB-146		1042267.8	1.251	NO	23.92	50	15.467	1.069		100				1564638	723774	8960141	7111801	5.7	9.8	579309.4	462958.4	0.9049	23.89	23.95	27-Jun-17	12:25:45	H5-17-WDM-0401	1
112	PCB-161		1113278.4	1.261	NO	23.98	50	17.244	1.142		100				1564638	723774	10707674	8559761	6.8	11.8	620955.6	492322.8	0.9074	23.95	24.02	27-Jun-17	12:25:45	H5-17-WDM-0401	1
113	PCB-153/168		2256473.9	1.246	NO	24.25	100	14.616	1.157		100				1564638	723774	18299178	14693633	11.7	20.3	1251995	1004479	0.9173	24.21	24.28	27-Jun-17	12:25:45	H5-17-WDM-0401	1
114	PCB-141		802810.5	1.252	NO	24.36	50	16.577	0.823		100				1564638	723774	7398397	5887331	4.7	8.1	446309.9	356500.6	0.9217	24.33	24.4	27-Jun-17	12:25:45	H5-17-WDM-0401	1
115	PCB-130		811730.8	1.239	NO	24.58	50	16.165	0.832		100				1564638	723774	7259881	5892778	4.6	8.1	449118.4	362612.4	0.9298	24.54	24.61	27-Jun-17	12:25:45	H5-17-WDM-0401	1
116	PCB-137/164		1963563.4	1.255	NO	24.74	100	9.455	1.007		100	28-Jun-17	ES170628MJ		1564638	723774	10332278	8294146	6.6	11.5	1092793	870770.9	0.936	24.71	24.77	27-Jun-17	12:25:45	H5-17-WDM-0401	1
117	PCB-138/163/129		2862970.8	1.253	NO	24.92	150	12.666	0.979		100				1564638	723774	20168690	16056602	12.9	22.2	1592314	1270656	0.9428	24.89	24.95	27-Jun-17	12:25:45	H5-17-WDM-0401	1
118	PCB-160		1192264.8	1.273	NO	25.02	50	16.468	1.223		100				1564638	723774	10994424	8690730	7	12	667642.3	524622.6	0.9465	24.99	25.05	27-Jun-17	12:25:45	H5-17-WDM-0401	1
119	PCB-158		1168052.3	1.272	NO	25.12	50	16.342	1.198		100				1564638	723774	10686900	8366763	6.8	11.6	653953.3	514099	0.9503	25.08	25.15	27-Jun-17	12:25:45	H5-17-WDM-0401	1
120	PCB-128/166		2080841.6	1.247	NO	25.59	100	13.435	1.067		100				1564638	723774	15514390	12368967	9.9	17.1	1154759	926083.1	0.9683	25.56	25.63	27-Jun-17	12:25:45	H5-17-WDM-0401	1
121	PCB-159		1235470.3	1.262	NO	26.05	50	15.401	1.267		100				1564638	723774	10616306	8379084	6.8	11.6	689322.9	546147.4	0.9857	26.02	26.09	27-Jun-17	12:25:45	H5-17-WDM-0401	1
122	PCB-162		1202152.4	1.262	NO	26.2	50	15.547	1.233		100				1564638	723774	10425740	8217043	6.7	11.4	670584.5	531567.9	0.9913	26.17	26.24	27-Jun-17	12:25:45	H5-17-WDM-0401	1
123	PCB-167		1175041.4	1.253	NO	26.45	48.61607	15.644		1.401	97.2				1564638	723774	10224581	8167672	6.5	11.3	653587.4	521454	1.0006	26.42	26.48	27-Jun-17	12:25:45	H5-17-WDM-0401	1
124	PCB-156/157		2349973.3	1.265	NO	27.07	95.64062	12.998		1.36	95.6				1564638	723774	17062298	13618212	10.9	18.8	1312640	1037334	1.0006	27.04	27.11	27-Jun-17	12:25:45	H5-17-WDM-0401	1
125	PCB-169		1120816.4	1.286	NO	28.73	48.75434	15.69		1.302	97.5				1564638	723774	9893961	7681656	6.3	10.6	630589.4	490227	1.0006	28.7	28.77	27-Jun-17	12:25:45	H5-17-WDM-0401	1
126	* PCB-188		1000089.8	0.932	NO	23.54	43.46652	16.674		0.85	86.9				1837	1380	8042548	8597885	4377.3	6228.3	482344.8	517745	1.0007	23.51	23.57	27-Jun-17	12:25:45	H5-17-WDM-0401	1
127	PCB-179		944153.7	0.929	NO	23.75	50	16.599	0.869		100				1837	1380	7548381	8076604	4108.3	5850.6	454751.2	489402.5	1.0098	23.72	23.79	27-Jun-17	12:25:45	H5-17-WDM-0401	1
128	PCB-184		1044748.5	0.932	NO	23.98	50	16.538	0.962		100				1837	1380	8335221	8934689	4536.6	6472.2	504003.1	540745.4	1.0196	23.95	24.02	27-Jun-17	12:25:45	H5-17-WDM-0401	1
129	PCB-176		976226.3	0.929	NO	24.21	50	15.931	0.899		100				1837	1380	7491528	7964599	4077.4	5769.5	470257.1	505969.2	1.0293	24.18	24.25	27-Jun-17	12:25:45	H5-17-WDM-0401	1
130	PCB-186		928852.6	0.934	NO	24.46	50	16.719	0.855		100				1837	1380	7499509	8014634	4081.8	5805.8	448564.6	480288	1.0398	24.43	24.49	27-Jun-17	12:25:45	H5-17-WDM-0401	1
131	PCB-178		695067.5	0.927	NO	25.12	50	16.462	0.64		100				1837	1380	5505094	5922743	2996.3	4290.4	334419.2	360648.3	1.0677	25.08	25.15	27-Jun-17	12:25:45	H5-17-WDM-0401	1
132	PCB-175		734878.2	0.927	NO	25.45	50	16.372	0.676		100				1837	1380	5788313	6204413	3150.4	4494.4	353558.9	381319.3	1.0817	25.41	25.48	27-Jun-17	12:25:45	H5-17-WDM-0401	1
133	PCB-187		839773.2	0.926	NO	25.58	50	16.725	0.773		100				1837	1380	6753799	7289212	3675.9	5280.3	403809.8	435963.4	1.0873	25.54	25.61	27-Jun-17	12:25:45	H5-17-WDM-0401	1
134	PCB-182		753275.1	0.935	NO	25.68	50	15.169	0.693		100				1837	1380	5521950	5984297	3005.4	4335	364039.7	389235.4	1.0915	25.64	25.71	27-Jun-17	12:25:45	H5-17-WDM-0401	1
135	PCB-183		763319.7	0.925	NO	25.91	50	15.861	0.703		100				1837	1380	5818995	6236983	3167.1	4518	366877.6	396442.1	1.1013	25.87	25.94	27-Jun-17	12:25:45	H5-17-WDM-0401	1
136	PCB-185		769338.5	0.942	NO	25.99	50	14.998	0.708		100				1837	1380	5598660	5953457	3047.2	4312.6	373283.8	396054.6	1.1048	25.96	26.02	27-Jun-17	12:25:45	H5-17-WDM-0401	1
137	PCB-174		633100.1	0.937	NO	26.05	50	17.489	0.583		100				1837	1380	5354861	5778761	2914.5	4186.1	306189.2	326910.9	1.1076	26.02	26.09	27-Jun-17	12:25:45	H5-17-WDM-0401	1
138	PCB-177		697308.3	0.924	NO	26.28	50	15.992	0.642		100				1837	1380	5356101	5831750	2915.2	4224.5	334927.2	362381.1	1.1173	26.25	26.32	27-Jun-17	12:25:45	H5-17-WDM-0401	1
139	PCB-181		739647.2	0.923	NO	26.48	50	16.376	0.681		100				1837	1380	5812688	6298073	3163.7	4562.3	354947.9	384699.3	0.8823	26.45	26.52	27-Jun-17	12:25:45	H5-17-WDM-0401	1
140	PCB-171/173		1312929.5	0.936	NO	26.61	100	16.361	0.604		100				1837	1380	10386628	11082328	5653.1	8028	634827.1	678102.4	0.8867	26.58	26.65	27-Jun-17	12:25:45	H5-17-WDM-0401	1
141	PCB-172		709953.5	0.928	NO	27.4	50	15.222	0.654		100				1837	1380	5201278	5634895	2830.9	4081.9	341696.5	368257	0.913	27.37	27.44	27-Jun-17	12:25:45	H5-17-WDM-0401	1
142	PCB-192		853662.3	0.934	NO	27.57	50	15.961	0.786		100				1837	1380	6579363	7047755	3580.9	5105.4	412215.1	441447.3	0.9184	27.53	27.6	27-Jun-17	12:25:45	H5-17-WDM-0401	1
143	PCB-180/193		1633629.5	0.928	NO	27.73	100	13.18	0.752		100				1837	1380	10363468	11144989	5640.5	8073.4	786297.9	847331.6	0.9239	27.7	27.76	27-Jun-17	12:25:45	H5-17-WDM-0401	1
144	PCB-191		922981.9	0.923	NO	27.93	50	16.356	0.85		100				1837	1380	7246505	7821536	3944	5665.9	443053.9	479928	0.9305	27.89	27.96	27-Jun-17	12:25:45	H5-17-WDM-0401	1
145	PCB-170		670171.9	0.93	NO	28.44	50	16.307	0.617		100				1837	1380	5266353	5626589	2866.3	4075.9	322948.2	347223.8	0.9474	28.4	28.47	27-Jun-17	12:25:45	H5-17-WDM-0401	1
146	PCB-190		1005773.8	0.928	NO	28.7	50	14.519	0.926		100				1837	1380	7029997	7630476	3826.2	5527.5	484189.2	521584.7	0.9562	28.67	28.73	27-Jun-17	12:25:45	H5-17-WDM-0401	1
147	* PCB-189		1026897.5	1.052	NO	30.03	53.15543	15.644		1.179	106.3				1735	1609	8237241	7791382	4746.9	4842.9	526545.7	500351.8	1.0005	30	30.06	27-Jun-17	12:25:45	H5-17-WDM-0401	1
148	* PCB-202		1735231.4	0.893	NO	26.32	75.63157	16.439		1.025	100.8				798	829	13454280	15079390	16863.4	18179.1	818415.1	916816.3	1.0006	26.28	26.35	27-Jun-17	12:25:45	H5-17-WDM-0401	1
149	PCB-201		1623839.8	0.897	NO	26.79	75	16.515	1.167		100				798	829	12682346	14149049	15895.9	17057.5	767909.7	855930.1	1.0187	26.76	26.83	27-Jun-17	12:25:45	H5-17-WDM-0401	1
150	PCB-204		1794607.3	0.9	NO	27.14	75	16.245	1.29		100				798	829	13805814	15304700	17304	18450.7	849864.9	944742.4	1.0319	27.11	27.17	27-Jun-17	0.517882	H5-17-WDM-0401	1
151	PCB-197		1659497.1	0.896	NO	27.25	75	16.54	1.193		100				798	829	12967760	14500476	16253.6	17481.2	784014.6	875482.6	1.0362	27.22	27.29	27-Jun-17	0.517882	H5-17-WDM-0401	1
152	PCB-200		1644458.3	0.905	NO	27.35	75	16.213	1.182		100				798	829	12664663	13955271	15873.7	16823.9	781120.9	863337.3	1.04	27.32	27.39	27-Jun-17	0.517882	H5-17-WDM-0401	1
153	PCB-198/199		2415245.6	0.891	NO	28.75	150	13.979	0.868		100				798	829	15911931	17828922	19943.8	21493.8	1138290	1276956	0.9151	28.72	28.78	27-Jun-17	0.517882	H5-17-WDM-0401	1
154	PCB-196		1146771.1	0.892	NO	29.09	75	16.623	0.824		100				798	829	8990341	9960960	11268.4	12008.5	540828.5	605942.6	0.9261	29.06	29.13	27-Jun-17	12:25:45	H5-17-WDM-0401	1
155	PCB-203		1262668.4	0.903	NO	29.19	75	16.227	0.908		100				798	829	9720655	10789951	12183.7	13007.9	599044.4	663624	0.9292	29.16	29.23	27-Jun-17	12:25:45	H5-17-WDM-0401	1
156	* PCB-195		998609.7	0.903	NO	29.92	75	16.301	0.718		100				1113	1881	7722511	8572420	6935.7	4558.4	473736.2	524873.5	0.9523	29.88	29.95	27-Jun-17	12:25:45	H5-17-WDM-0401	1
157	PCB-194		990308.2	0.92	NO	31.16	75	14.935	0.712		100				1113	1881	7087085	7611996	6365	4047.7	474517.2	515790.9	0.9917	31.12	31.19	27-Jun-17	12:25:45	H5-17-WDM-0401	1
158	PCB-205		1181803.8	0.912	NO	31.43	70.79171	14.733		1.135	94.4				1113	1881	8304169	9085678	7458.1	4831.4	563660.4	618143.4	1.0005	31.4	31.47	27-Jun-17	12:25:45	H5-17-WDM-0401	1
159	* PCB-208		955027.3	0.807	NO	29.75	71.01586	15.972		0.86	94.7				970	1445	6812758	8452465	7020.6	5850.1	426533.3	528494.1	1	29.72	29.79	27-Jun-17	12:25:45	H5-17-WDM-0401	1
160	PCB-207		930188.8	0.816	NO	30.24	75	16.2	0.922		100				970	1445	6768509	8302645	6975	5746.4	417821.4	512367.4	1.0164	30.21	30.28	27-Jun-17	12:25:45	H5-17-WDM-0401	1
161	PCB-206		655785.2	0.813	NO	32.53	71.37371	13.757		0.816	95.2				970	1445	4046379	4958480	4169.8	3431.9	294124	361661.2	1.0005	32.49	32.56	27-Jun-17	12:25:45	H5-17-WDM-0401	1
162	* PCB-209		961649.9	1.216	NO	33.67	81.83723	12.347		1.061	109.1				280	400	6516365	5391780	23251.8	13467.8	527754.3	433895.6	1.0005	33.63	33.7	27-Jun-17	12:25:45	H5-17-WDM-0401	1
163	13C-PCB-31		3088500.6	1.093	NO	15.81	100.181	17.65		1.138	100.2				15327	6044	28468924	25954466	1857.4	4293.9	1612947	1475554	0.868	15.77	15.84	27-Jun-17	12:25:45	H5-17-WDM-0401	1
164	13C-PCB-95		1813462.6	1.582	NO	19.12	91.02762	17.444		0.868	91				1998	1300	19384388	12354250	9702.2	9506.4	1111209	702253.8	1.0922	19.09	19.15	27-Jun-17	12:25:45	H5-17-WDM-0401	1
165	13C-PCB-153		1756347.8	1.31	NO	24.21	102.9306	16.4		0.875	102.9				1266	1413	16337189	12531439	12904	8865.7	996144	760203.8	1.1798	24.18	24.25	27-Jun-17	12:25:45	H5-17-WDM-0401	1
166	13C-PCB-28		3262678.8	1.079	NO	15.97	103.3022	17.9		1.301	103.3				15327	6044	30316898	28058358	1978	4642	1693666	1569013	0.9408	15.94	16.01	27-Jun-17	12:25:45	H5-17-WDM-0401	1
167	13C-PCB-111		2450382.8	1.569	NO	22.04	99.62632	16.724		1.216	99.6				1998	1300	25027198	15997594	12526.5	12309.9	1496507	953875.6	1.0672	22.01	22.08	27-Jun-17	12:25:45	H5-17-WDM-0401	1
168	13C-PCB-178		1888454.6	1.065	NO	25.1	104.251	16.316		1.206	104.3				1773	1241	15893523	14957857	8963.2	12050.7	974105.5	914349.1	1.0079	25.07	25.14	27-Jun-17	12:25:45	H5-17-WDM-0401	1
169	13C-PCB-1		4215068.3	3.215	NO	8.86	106.8572	19.48		0.901	106.9				1988	14186	62628324	19568786	31503.4	1379.5	3214963	1000105	0.7487	8.83	8.9	27-Jun-17	12:25:45	H5-17-WDM-0401	1
170	13C-PCB-3		3954238.4	3.178	NO	10.41	101.4838	18.845		0.89	101.5				1988	14186	56682184	17787148	28512.3	1253.9	3007815	946423.9	0.8792	10.38	10.44	27-Jun-17	12:25:45	H5-17-WDM-0401	1
171	13C-PCB-4		2954751.4	1.614	NO	10.57	104.9624	19.281		0.643	105				6667	2550	35174240	21879158	5275.6	8579.8	1824310	1130441	0.8931	10.54	10.61	27-Jun-17	12:25:45	H5-17-WDM-0401	1

172	13C-PCB-15		3399912.8	1.537	NO	14.26	108.9186	18.303		0.713	108.9	5409	2851	37701256	24554308	6970	8613.6	2059843	1340070	1.2042	14.22	14.29	27-Jun-17	12:25:45	H5-17-WDM-0401	1
173	13C-PCB-19		2259713	1.043	NO	12.58	92.50025	18.743		0.558	92.5	16935	7679	21624678	20750238	1276.9	2702.2	1153738	1105975	1.0625	12.55	12.61	27-Jun-17	12:25:45	H5-17-WDM-0401	1
174	13C-PCB-37		3158423.9	1.077	NO	18.21	104.0813	17.235		1.25	104.1	15327	6044	28221230	26227942	1841.3	4339.2	1637452	1520972	1.0728	18.18	18.25	27-Jun-17	12:25:45	H5-17-WDM-0401	1
175	13C-PCB-54		2886623.4	0.811	NO	14.44	98.67691	17.413		1.205	98.7	808	669	22515886	28112138	27881.1	42051.3	1293039	1593585	0.8504	14.4	14.47	27-Jun-17	12:25:45	H5-17-WDM-0401	1
176	13C-PCB-81		3168515.9	0.785	NO	21.8	107.2209	16.365		1.461	107.2	1598	1439	22800066	29093318	14266.2	20211.9	1393183	1775333	1.0554	21.76	21.83	27-Jun-17	12:25:45	H5-17-WDM-0401	1
177	13C-PCB-77		3203380	0.788	NO	22.11	105.5119	16.379		1.501	105.5	1598	1439	23117540	29095978	14464.8	20213.8	1411445	1791935	1.0704	22.08	22.14	27-Jun-17	12:25:45	H5-17-WDM-0401	1
178	13C-PCB-104		2549856.3	1.574	NO	17.5	102.7413	17.14		1.227	102.7	598	627	26727462	17118798	44699.1	27295	1559319	990537.1	1.0311	17.47	17.54	27-Jun-17	12:25:45	H5-17-WDM-0401	1
179	13C-PCB-123		2265494.4	1.66	NO	23.11	117.2825	16.026		0.955	117.3	2408	2127	22655106	13601026	9408.4	6394.7	1413664	851830.2	1.1191	23.08	23.15	27-Jun-17	12:25:45	H5-17-WDM-0401	1
180	13C-PCB-118		2195506.5	1.656	NO	23.28	116.5893	16.437		0.931	116.6	2408	2127	22498536	13676496	9343.4	6430.2	1368803	826703.9	1.127	23.24	23.31	27-Jun-17	12:25:45	H5-17-WDM-0401	1
181	13C-PCB-114		2169840.8	1.658	NO	23.57	119.1953	16.12		0.9	119.2	2408	2127	21817166	13173143	9060.4	6193.5	1353433	816407.5	0.9466	23.54	23.61	27-Jun-17	12:25:45	H5-17-WDM-0401	1
182	13C-PCB-105		2254794.3	1.671	NO	23.94	118.214	16.053		0.943	118.2	2408	2127	22643644	13515837	9403.6	6354.6	1410584	844210.2	0.9611	23.9	23.97	27-Jun-17	12:25:45	H5-17-WDM-0401	1
183	13C-PCB-126		2076684.4	1.666	NO	25.53	117.6061	15.357		0.873	117.6	2408	2127	19931014	11983781	8277.1	5634.3	1297827	778857.2	1.0251	25.5	25.56	27-Jun-17	12:25:45	H5-17-WDM-0401	1
184	13C-PCB-155		2502884.8	1.26	NO	20.52	97.58775	16.432		1.268	97.6	1215	1130	22928808	18077346	18867.3	16001.9	1395343	1107542	0.9937	20.49	20.56	27-Jun-17	12:25:45	H5-17-WDM-0401	1
185	13C-PCB-167		1725183.2	1.302	NO	26.43	104.4152	16.149		1.1	104.4	1266	1413	15756922	12255682	12445.6	8670.6	975715.2	749468	1.0613	26.4	26.47	27-Jun-17	12:25:45	H5-17-WDM-0401	1
186	13C-PCB-156/157		3613363.5	1.31	NO	27.06	216.1412	12.962		1.113	108.1	1266	1413	26558140	20328816	20977	14382.1	2048927	1564437	1.0864	27.02	27.09	27-Jun-17	12:25:45	H5-17-WDM-0401	1
187	13C-PCB-169		1765672.9	1.301	NO	28.72	109.351	15.43		1.075	109.4	1266	1413	15403389	11871416	12166.4	8398.7	998300.3	767372.6	1.153	28.68	28.75	27-Jun-17	12:25:45	H5-17-WDM-0401	1
188	13C-PCB-188		2706856.1	1.053	NO	23.52	101.1296	16.574		1.782	101.1	1773	1241	23010522	21916822	12976.8	17657.2	1388323	1318534	0.9446	23.49	23.56	27-Jun-17	12:25:45	H5-17-WDM-0401	1
189	13C-PCB-189		1638572.4	1.086	NO	30.01	115.9303	16.153		0.941	115.9	1799	1361	13780112	12677996	7659.2	9314.8	853091.5	785480.9	0.9639	29.98	30.05	27-Jun-17	12:25:45	H5-17-WDM-0401	1
190	13C-PCB-202		2238362.5	0.917	NO	26.3	103.2011	16.306		1.444	103.2	751	856	17460592	19082290	23241	22286.4	1070818	1167545	1.0561	26.27	26.33	27-Jun-17	12:25:45	H5-17-WDM-0401	1
191	13C-PCB-205		1470845.7	0.959	NO	31.42	109.0222	14.727		1.251	109	1649	1907	10605534	11123888	6431.8	5832.6	720147.5	750698.2	1.0089	31.38	31.45	27-Jun-17	12:25:45	H5-17-WDM-0401	1
192	13C-PCB-208		1563730.9	0.716	NO	29.75	100.1379	15.632		1.448	100.1	1008	1416	10201127	14255000	10124.7	10068.2	652588.6	911142.3	0.9555	29.72	29.79	27-Jun-17	12:25:45	H5-17-WDM-0401	1
193	13C-PCB-206		1125986.4	0.713	NO	32.51	106.6487	13.753		0.979	106.6	1008	1416	6444179	9055293	6395.9	6395.7	468570.1	657416.3	1.044	32.48	32.54	27-Jun-17	12:25:45	H5-17-WDM-0401	1
194	13C-PCB-209		1107517.7	1.168	NO	33.65	130.4912	12.275		0.787	130.5	331	238	7324595	6196455	22145.3	26066.3	596709.8	510807.9	1.0807	33.62	33.69	27-Jun-17	12:25:45	H5-17-WDM-0401	1
195	13C-PCB-9		4378004.1	1.593	NO	11.84	100	18.768	43780.04		100	6667	2550	50476132	31681366	7570.7	12423.7	2689411	1688593	0.4754	11.81	11.87	27-Jun-17	12:25:45	H5-17-WDM-0401	1
196	13C-PCB-52		2427658.1	0.781	NO	16.98	100	17.605	24276.58		100	1108	934	18737724	23938506	16911.1	25634.7	1064326	1363332	0.6817	16.94	17.01	27-Jun-17	12:25:45	H5-17-WDM-0401	1
197	13C-PCB-101		2022675.8	1.574	NO	20.65	100	17.101	20226.76		100	1998	1300	21153526	13397980	10587.7	10309.6	1236976	785700.1	0.8293	20.62	20.69	27-Jun-17	12:25:45	H5-17-WDM-0401	1
198	13C-PCB-138		1502031.4	1.329	NO	24.9	100	16.147	15020.31		100	1266	1413	13839351	10328084	10931	7306.9	857103.3	644928.1	0	24.87	24.94	27-Jun-17	12:25:45	H5-17-WDM-0401	1
199	13C-PCB-194		1078437	0.942	NO	31.14	100	14.989	10784.37		100	1649	1907	7842696	8313466	4756.3	4359	523243.4	555193.6	1.2503	31.11	31.17	27-Jun-17	12:25:45	H5-17-WDM-0401	1
200	Total MoCB-F1	10					205047.4		17.235			1486		46565529				2418178					27-Jun-17	12:25:45	H5-17-WDM-0401	1
201	Total DiCB-F1	8					31826.24		4.272			2223		69513165				3723990					27-Jun-17	0.517882	H5-17-WDM-0401	1
202	Total DiCB-F2	6					45576.41		8.743			4184		50502544				3074617					27-Jun-17	0.517882	H5-17-WDM-0401	1
203	Total TrCB-F1	1					25.89767					1365		5880504				313861.6					27-Jun-17	0.517882	H5-17-WDM-0401	1
204	Total TrCB-F2	6					175		0.853			885		34699200				2065897					27-Jun-17	0.517882	H5-17-WDM-0401	1
205	Total TrCB-F3	18					259378.9		3.001			1252		1.06E+08				6386473					27-Jun-17	12:25:45	H5-17-WDM-0401	1
206	Total TeCB-F2	1					53.73507					574		12229344				683087.8					27-Jun-17	12:25:45	H5-17-WDM-0401	1
207	Total TeCB-F3	13					1100		0.701			612		1.53E+08				9677803					27-Jun-17	12:25:45	H5-17-WDM-0401	1
208	Total TeCB-F4	25					561296.9		6.08			1		1.61E+08				10498716					27-Jun-17	12:25:45	H5-17-WDM-0401	1
209	Total PeCB-F3	2					98.3549		27.2			661		27840257				1617669					27-Jun-17	12:25:45	H5-17-WDM-0401	1
210	Total PeCB-F4	19					18181.46		0.92			516		2.5E+08				21634713					27-Jun-17	12:25:45	H5-17-WDM-0401	1
211	Total PeCB-F5	30					978346.1		31.763			456659		1.45E+08				9118927					27-Jun-17	12:25:45	H5-17-WDM-0401	1
212	Total HxCB-F4	12					1403.951		6.883			815		96836843				5991579					27-Jun-17	12:25:45	H5-17-WDM-0401	1
213	Total HxCB-F5	37					563082.1		12.263			1564638		2.68E+08				18257748					27-Jun-17	12:25:45	H5-17-WDM-0401	1
214	Total HpCB-F5	26					267628.8		2.468			1837		1.44E+08				9066932					27-Jun-17	12:25:45	H5-17-WDM-0401	1
215	Total HpCB-F6	1					53.15543					1735		9877138				630202.5					27-Jun-17	12:25:45	H5-17-WDM-0401	1
216	Total OcCB-F5	12					1665.98		10.619			798		1E+08				6279917					27-Jun-17	12:25:45	H5-17-WDM-0401	1
217	Total OcCB-F6	6					295513.2		27.259			1113		24100188				1578250					27-Jun-17	12:25:45	H5-17-WDM-0401	1
218	Total NoCB-F6	3					217.3896		40.079			970		17627646				1138479					27-Jun-17	12:25:45	H5-17-WDM-0401	1
219	Total DeCB-F7	1					81.83723					280		6516365				527754.3					27-Jun-17	12:25:45	H5-17-WDM-0401	1
220	Total 13C-MoCB-F1	2					208.341					1988		1.2E+08				6249627					27-Jun-17	12:25:45	H5-17-WDM-0401	1
221	Total 13C-DiCB-F1	5					206.1122		21923.77			6667		85860774				4531193					27-Jun-17	12:25:45	H5-17-WDM-0401	1
222	Total 13C-DiCB-F2	1					108.9186					5409		37701256				2059843					27-Jun-17	12:25:45	H5-17-WDM-0401	1
223	Total 13C-TrCB-F1	1					92.50025					16935		30105483				1670230					27-Jun-17	12:25:45	H5-17-WDM-0401	1
224	Total 13C-TrCB-F3	3					307.5645					15327		88550688				5041149					27-Jun-17	12:25:45	H5-17-WDM-0401	1
225	Total 13C-TeCB-F2	1					98.67691					808		22515886				1293039					27-Jun-17	12:25:45	H5-17-WDM-0401	1
226	Total 13C-TeCB-F3	5					103.0947		24276.58			1108		19313145				1097813					27-Jun-17	12:25:45	H5-17-WDM-0401	1
227	Total 13C-TeCB-F4	2					212.7328					1598		47005378				2870375					27-Jun-17	12:25:45	H5-17-WDM-0401	1
228	Total 13C-PeCB-F3	1					102.7413					598		26734739				1559816					27-Jun-17	12:25:45	H5-17-WDM-0401	1
229	Total 13C-PeCB-F4	8					294.0716		6808.972			1998		65804765				3858703					27-Jun-17	12:25:45	H5-17-WDM-0401	1
230	Total 13C-PeCB-F5	5					588.8873					2408		1.11E+08				6975133					27-Jun-17	12:25:45	H5-17-WDM-0401	1
231	Total 13C-HxCB-F4	1					97.58775					1215		23065923				1403302					27-Jun-17	12:25:45	H5-17-WDM-0401	1
232	Total 13C-HxCB-F5	12					657.0924		3116.67			1266		88549201				5918843					27-Jun-17	12:25:45	H5-17-WDM-0401	1
233	Total 13C-HpCB-F5	2					205.3806					1773		39607492				2407704					27-Jun-17	12:25:45	H5-17-WDM-0401	1
234	Total 13C-HpCB-F6	1					115.9303					1799		14824864				924310.5					27-Jun-17	12:25:45	H5-17-WDM-0401	1
235	Total 13C-OcCB-F5	1					103.2011					751		17560358				1077666					27-Jun-17	12:25:45	H5-17-WDM-0401	1
236	Total 13C-OcCB-F6	4					226.7044		5460.378			1649		19121904				1291503					27-Jun-17	12:25:45	H5-17-WDM-0401	1
237	Total 13C-NoCB-F6	2					206.7867					1008		16702247				1124762					27-Jun-17	12:25:45	H5-17-WDM-0401	1
238	Total 13C-DeCB-F7	1					130.4912					331		7324595				596709.8					27-Jun-17	12:25:45	H5-17-WDM-0401	1
239	Lockmass F1											3057378		0				0					27-Jun-17	12:25:45	H5-17-WDM-0401	1
240	Lockmass F2											4998183		0				0					27-Jun-17	12:25:45	H5-17-WDM-0401	1
241	Lockmass F3											4143931		0				0					27-Jun-17	12:25:45	H5-17-WDM-0401	1
242	Lockmass F4											5846140		0				0					27-Jun-17	12:25:45	H5-17-WDM-0401	1
243	Lockmass F5											1096345		0				0					27-Jun-17	12:25:45	H5-17-WDM-0401	1
244	Lockmass F6											582366		0				0					27-Jun-17	12:25:45	H5-17-WDM-0401	1
245	Lockmass F7											441105		0				0					27-Jun-17	12:25:45	H5-17-WDM-0401	1

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Continuing Calibration Report

Sample Name	**CCV**	Sampling Date	n/a		
ALS Sample ID	H5-17-WDM-0391	Extraction Date	n/a		Approved:
Analysis Method	EPA 1668C	Sample Size	1	n/a	*E. Sabljic*
Analysis Type	CCV	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170622B01
Run Date	22-Jun-17 18:28
Final Volume	25 ul
Dilution Factor	1
Analysis Units	%
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	**pg/uL**	**Ret. Time**	**% Rec**	**Limits**	**Flags**
PCB-001	50	8.86	108	75-125	
PCB-003	50	10.39	111	75-125	
PCB-004	50	10.57	103	75-125	NJ
PCB-015	50	14.26	124	75-125	
PCB-019	50	12.60	104	75-125	
PCB-037	50	18.21	100	75-125	
PCB-054	50	14.45	109	75-125	
PCB-081	50	21.80	90	75-125	
PCB-077	50	22.11	96	75-125	
PCB-104	50	17.52	99	75-125	
PCB-123	50	23.11	105	75-125	
PCB-118	50	23.28	112	75-125	
PCB-114	50	23.57	107	75-125	
PCB-105	50	23.94	107	75-125	
PCB-126	50	25.51	107	75-125	
PCB-155	50	20.52	108	75-125	
PCB-167	50	26.43	96	75-125	
PCB-156/157	100	27.07	95	75-125	
PCB-169	50	28.72	96	75-125	
PCB-188	50	23.54	87	75-125	
PCB-189	50	30.01	114	75-125	
PCB-202	50	26.32	102	75-125	
PCB-205	50	31.43	95	75-125	
PCB-208	50	29.75	98	75-125	
PCB-206	50	32.53	98	75-125	
PCB-209	50	33.67	131	75-125	
Extraction Standards		**Time**	**% Rec**	**Limits**	
13C12-PCB-001	100	8.85	106	50-145	
13C12-PCB-003	100	10.39	100	50-145	
13C12-PCB-004	100	10.56	103	50-145	
13C12-PCB-015	100	14.24	90	50-145	
13C12-PCB-019	100	12.58	84	50-145	
13C12-PCB-037	100	18.20	98	50-145	
13C12-PCB-054	100	14.44	95	50-145	
13C12-PCB-081	100	21.80	119	50-145	
13C12-PCB-077	100	22.09	115	50-145	
13C12-PCB-104	100	17.50	102	50-145	
13C12-PCB-123	100	23.10	120	50-145	
13C12-PCB-118	100	23.26	121	50-145	
13C12-PCB-114	100	23.57	122	50-145	
13C12-PCB-105	100	23.92	121	50-145	
13C12-PCB-126	100	25.51	120	50-145	
13C12-PCB-155	100	20.51	89	50-145	
13C12-PCB-167	100	26.42	104	50-145	
13C12-PCB-156/157	200	27.06	106	50-145	
13C12-PCB-169	100	28.72	106	50-145	
13C12-PCB-188	100	23.52	105	50-145	
13C12-PCB-189	100	30.00	104	50-145	
13C12-PCB-202	100	26.30	101	50-145	
13C12-PCB-205	100	31.42	107	50-145	
13C12-PCB-208	100	29.74	103	50-145	
13C12-PCB-206	100	32.51	111	50-145	
13C12-PCB-209	100	33.65	102	50-145	
Cleanup Standards					
13C12-PCB-028	100	15.97	99	65-135	
13C12-PCB-111	100	22.04	103	75-125	
13C12-PCB-178	100	25.10	109	75-125	

NJ	Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.

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Continuing Calibration Report

Sample Name	**CCV**	Sampling Date	n/a		
ALS Sample ID	H5-17-WDM-0391	Extraction Date	n/a		Approved:
Analysis Method	EPA 1668C	Sample Size	1	n/a	*E. Sabljic*
Analysis Type	CCV	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170622B18
Run Date	23-Jun-17 05:42
Final Volume	25 ul
Dilution Factor	1
Analysis Units	%
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	**pg/uL**	**Ret. Time**	**% Rec**	**Limits**	**Flags**
PCB-001	50	8.83	114	75-125	
PCB-003	50	10.36	116	75-125	
PCB-004	50	10.54	102	75-125	
PCB-015	50	14.21	109	75-125	
PCB-019	50	12.55	106	75-125	
PCB-037	50	18.16	107	75-125	
PCB-054	50	14.41	110	75-125	
PCB-081	50	21.75	90	75-125	
PCB-077	50	22.06	94	75-125	
PCB-104	50	17.47	99	75-125	
PCB-123	50	23.06	98	75-125	
PCB-118	50	23.23	98	75-125	
PCB-114	50	23.54	97	75-125	
PCB-105	50	23.89	102	75-125	
PCB-126	50	25.48	102	75-125	
PCB-155	50	20.47	107	75-125	
PCB-167	50	26.38	87	75-125	
PCB-156/157	100	27.02	96	75-125	
PCB-169	50	28.68	97	75-125	
PCB-188	50	23.49	87	75-125	
PCB-189	50	29.97	108	75-125	
PCB-202	50	26.27	97	75-125	
PCB-205	50	31.37	94	75-125	
PCB-208	50	29.70	98	75-125	
PCB-206	50	32.46	100	75-125	
PCB-209	50	33.60	112	75-125	
Extraction Standards		**Time**	**% Rec**	**Limits**	
13C12-PCB-001	100	8.82	105	50-145	
13C12-PCB-003	100	10.34	102	50-145	
13C12-PCB-004	100	10.52	100	50-145	
13C12-PCB-015	100	14.21	111	50-145	
13C12-PCB-019	100	12.53	81	50-145	
13C12-PCB-037	100	18.15	104	50-145	
13C12-PCB-054	100	14.39	93	50-145	
13C12-PCB-081	100	21.75	121	50-145	
13C12-PCB-077	100	22.04	118	50-145	
13C12-PCB-104	100	17.46	102	50-145	
13C12-PCB-123	100	23.05	133	50-145	
13C12-PCB-118	100	23.23	132	50-145	
13C12-PCB-114	100	23.52	133	50-145	
13C12-PCB-105	100	23.87	133	50-145	
13C12-PCB-126	100	25.46	130	50-145	
13C12-PCB-155	100	20.46	86	50-145	
13C12-PCB-167	100	26.37	62	50-145	
13C12-PCB-156/157	200	27.01	105	50-145	
13C12-PCB-169	100	28.67	86	50-145	
13C12-PCB-188	100	23.48	101	50-145	
13C12-PCB-189	100	29.95	113	50-145	
13C12-PCB-202	100	26.25	69	50-145	
13C12-PCB-205	100	31.35	74	50-145	
13C12-PCB-208	100	29.69	103	50-145	
13C12-PCB-206	100	32.44	106	50-145	
13C12-PCB-209	100	33.59	134	50-145	
Cleanup Standards					
13C12-PCB-028	100	15.92	106	65-135	
13C12-PCB-111	100	21.99	101	75-125	
13C12-PCB-178	100	25.05	106	75-125	

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Continuing Calibration Report

Sample Name	**CCV**	Sampling Date	n/a		
ALS Sample ID	H5-17-CCV-0395	Extraction Date	n/a		Approved:
Analysis Method	EPA 1668C	Sample Size	1	n/a	*E. Sabljic*
Analysis Type	CCV	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170624A01
Run Date	24-Jun-17 02:35
Final Volume	25 ul
Dilution Factor	1
Analysis Units	%
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	**pg/uL**	**Ret. Time**	**% Rec**	**Limits**	**Flags**
PCB-001	50	8.86	106	75-125	
PCB-003	50	10.39	110	75-125	
PCB-004	50	10.57	99	75-125	
PCB-015	50	14.26	104	75-125	
PCB-019	50	12.58	105	75-125	
PCB-037	50	18.21	117	75-125	
PCB-054	50	14.44	109	75-125	
PCB-081	50	21.80	101	75-125	
PCB-077	50	22.09	101	75-125	
PCB-104	50	17.50	113	75-125	
PCB-123	50	23.10	112	75-125	
PCB-118	50	23.28	110	75-125	
PCB-114	50	23.57	106	75-125	
PCB-105	50	23.92	108	75-125	
PCB-126	50	25.51	111	75-125	
PCB-155	50	20.52	117	75-125	
PCB-167	50	26.43	107	75-125	
PCB-156/157	100	27.06	106	75-125	
PCB-169	50	28.72	106	75-125	
PCB-188	50	23.52	100	75-125	
PCB-189	50	30.01	115	75-125	
PCB-202	50	26.30	111	75-125	
PCB-205	50	31.42	107	75-125	
PCB-208	50	29.75	110	75-125	
PCB-206	50	32.51	111	75-125	
PCB-209	50	33.65	108	75-125	
Extraction Standards		**Time**	**% Rec**	**Limits**	
13C12-PCB-001	100	8.86	103	50-145	
13C12-PCB-003	100	10.39	98	50-145	
13C12-PCB-004	100	10.56	100	50-145	
13C12-PCB-015	100	14.24	102	50-145	
13C12-PCB-019	100	12.56	93	50-145	
13C12-PCB-037	100	18.20	104	50-145	
13C12-PCB-054	100	14.42	101	50-145	
13C12-PCB-081	100	21.78	114	50-145	
13C12-PCB-077	100	22.09	112	50-145	
13C12-PCB-104	100	17.49	104	50-145	
13C12-PCB-123	100	23.10	115	50-145	
13C12-PCB-118	100	23.26	116	50-145	
13C12-PCB-114	100	23.56	117	50-145	
13C12-PCB-105	100	23.90	115	50-145	
13C12-PCB-126	100	25.50	111	50-145	
13C12-PCB-155	100	20.51	97	50-145	
13C12-PCB-167	100	26.42	103	50-145	
13C12-PCB-156/157	200	27.04	104	50-145	
13C12-PCB-169	100	28.72	98	50-145	
13C12-PCB-188	100	23.51	107	50-145	
13C12-PCB-189	100	30.00	94	50-145	
13C12-PCB-202	100	26.28	107	50-145	
13C12-PCB-205	100	31.40	106	50-145	
13C12-PCB-208	100	29.74	117	50-145	
13C12-PCB-206	100	32.49	100	50-145	
13C12-PCB-209	100	33.64	113	50-145	
Cleanup Standards					
13C12-PCB-028	100	15.96	101	65-135	
13C12-PCB-111	100	22.03	102	75-125	
13C12-PCB-178	100	25.09	108	75-125	

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Continuing Calibration Report

Sample Name	**CCV**	Sampling Date	n/a		
ALS Sample ID	H5-17-CCV-0397	Extraction Date	n/a		Approved:
Analysis Method	EPA 1668C	Sample Size	1	n/a	*E. Sabljic*
Analysis Type	CCV	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170624A18
Run Date	24-Jun-17 13:50
Final Volume	25 ul
Dilution Factor	1
Analysis Units	%
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	**pg/uL**	**Ret. Time**	**% Rec**	**Limits**	**Flags**
PCB-001	50	8.85	108	75-125	
PCB-003	50	10.38	111	75-125	
PCB-004	50	10.54	100	75-125	
PCB-015	50	14.23	101	75-125	
PCB-019	50	12.55	104	75-125	
PCB-037	50	18.18	119	75-125	
PCB-054	50	14.41	109	75-125	
PCB-081	50	21.77	102	75-125	
PCB-077	50	22.06	103	75-125	
PCB-104	50	17.47	114	75-125	
PCB-123	50	23.06	110	75-125	
PCB-118	50	23.25	108	75-125	
PCB-114	50	23.54	106	75-125	
PCB-105	50	23.89	107	75-125	
PCB-126	50	25.48	109	75-125	
PCB-155	50	20.47	120	75-125	
PCB-167	50	26.40	109	75-125	
PCB-156/157	100	27.02	108	75-125	
PCB-169	50	28.68	108	75-125	
PCB-188	50	23.49	101	75-125	
PCB-189	50	29.98	113	75-125	
PCB-202	50	26.27	110	75-125	
PCB-205	50	31.38	109	75-125	
PCB-208	50	29.72	110	75-125	
PCB-206	50	32.46	109	75-125	
PCB-209	50	33.60	108	75-125	
Extraction Standards		**Time**	**% Rec**	**Limits**	
13C12-PCB-001	100	8.83	106	50-145	
13C12-PCB-003	100	10.36	101	50-145	
13C12-PCB-004	100	10.52	101	50-145	
13C12-PCB-015	100	14.21	109	50-145	
13C12-PCB-019	100	12.53	93	50-145	
13C12-PCB-037	100	18.16	108	50-145	
13C12-PCB-054	100	14.39	103	50-145	
13C12-PCB-081	100	21.75	117	50-145	
13C12-PCB-077	100	22.04	114	50-145	
13C12-PCB-104	100	17.46	103	50-145	
13C12-PCB-123	100	23.06	124	50-145	
13C12-PCB-118	100	23.23	125	50-145	
13C12-PCB-114	100	23.52	123	50-145	
13C12-PCB-105	100	23.87	123	50-145	
13C12-PCB-126	100	25.46	122	50-145	
13C12-PCB-155	100	20.46	95	50-145	
13C12-PCB-167	100	26.38	103	50-145	
13C12-PCB-156/157	200	27.01	104	50-145	
13C12-PCB-169	100	28.67	100	50-145	
13C12-PCB-188	100	23.48	104	50-145	
13C12-PCB-189	100	29.97	103	50-145	
13C12-PCB-202	100	26.25	105	50-145	
13C12-PCB-205	100	31.37	106	50-145	
13C12-PCB-208	100	29.70	111	50-145	
13C12-PCB-206	100	32.44	102	50-145	
13C12-PCB-209	100	33.59	121	50-145	
Cleanup Standards					
13C12-PCB-028	100	15.92	106	65-135	
13C12-PCB-111	100	21.99	101	75-125	
13C12-PCB-178	100	25.05	106	75-125	

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Continuing Calibration Report

Sample Name	**CCV**	Sampling Date	n/a		
ALS Sample ID	H5-17-WDM-0398	Extraction Date	n/a		Approved:
Analysis Method	EPA 1668C	Sample Size	1	n/a	*E. Sabljic*
Analysis Type	CCV	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170626A01
Run Date	26-Jun-17 13:01
Final Volume	25 ul
Dilution Factor	1
Analysis Units	%
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	**pg/uL**	**Ret. Time**	**% Rec**	**Limits**	**Flags**
PCB-001	50	8.85	109	75-125	
PCB-003	50	10.39	112	75-125	
PCB-004	50	10.56	98	75-125	
PCB-015	50	14.24	100	75-125	
PCB-019	50	12.58	100	75-125	
PCB-037	50	18.20	105	75-125	
PCB-054	50	14.44	107	75-125	
PCB-081	50	21.80	87	75-125	
PCB-077	50	22.09	94	75-125	
PCB-104	50	17.50	95	75-125	
PCB-123	50	23.10	94	75-125	
PCB-118	50	23.26	102	75-125	
PCB-114	50	23.56	98	75-125	
PCB-105	50	23.92	96	75-125	
PCB-126	50	25.50	97	75-125	
PCB-155	50	20.51	100	75-125	
PCB-167	50	26.42	95	75-125	
PCB-156/157	100	27.06	94	75-125	
PCB-169	50	28.72	94	75-125	
PCB-188	50	23.51	85	75-125	
PCB-189	50	30.00	103	75-125	
PCB-202	50	26.28	99	75-125	
PCB-205	50	31.40	95	75-125	
PCB-208	50	29.74	97	75-125	
PCB-206	50	32.49	97	75-125	
PCB-209	50	33.64	105	75-125	
Extraction Standards		**Time**	**% Rec**	**Limits**	
13C12-PCB-001	100	8.85	100	50-145	
13C12-PCB-003	100	10.38	97	50-145	
13C12-PCB-004	100	10.56	100	50-145	
13C12-PCB-015	100	14.24	103	50-145	
13C12-PCB-019	100	12.56	96	50-145	
13C12-PCB-037	100	18.18	103	50-145	
13C12-PCB-054	100	14.42	101	50-145	
13C12-PCB-081	100	21.78	101	50-145	
13C12-PCB-077	100	22.08	97	50-145	
13C12-PCB-104	100	17.49	103	50-145	
13C12-PCB-123	100	23.08	103	50-145	
13C12-PCB-118	100	23.25	102	50-145	
13C12-PCB-114	100	23.56	105	50-145	
13C12-PCB-105	100	23.90	104	50-145	
13C12-PCB-126	100	25.50	101	50-145	
13C12-PCB-155	100	20.49	101	50-145	
13C12-PCB-167	100	26.40	99	50-145	
13C12-PCB-156/157	200	27.04	101	50-145	
13C12-PCB-169	100	28.70	96	50-145	
13C12-PCB-188	100	23.49	106	50-145	
13C12-PCB-189	100	29.98	97	50-145	
13C12-PCB-202	100	26.28	104	50-145	
13C12-PCB-205	100	31.38	103	50-145	
13C12-PCB-208	100	29.72	106	50-145	
13C12-PCB-206	100	32.48	97	50-145	
13C12-PCB-209	100	33.62	111	50-145	
Cleanup Standards					
13C12-PCB-028	100	15.96	100	65-135	
13C12-PCB-111	100	22.01	97	75-125	
13C12-PCB-178	100	25.07	105	75-125	

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Continuing Calibration Report

Sample Name	**CCV**	Sampling Date	n/a		
ALS Sample ID	H5-17-WDM-0399	Extraction Date	n/a		Approved:
Analysis Method	EPA 1668C	Sample Size	1	n/a	*E. Sabljic*
Analysis Type	CCV	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170626A17
Run Date	26-Jun-17 23:44
Final Volume	25 ul
Dilution Factor	1
Analysis Units	%
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	**pg/uL**	**Ret. Time**	**% Rec**	**Limits**	**Flags**
PCB-001	50	8.83	113	75-125	
PCB-003	50	10.36	117	75-125	
PCB-004	50	10.54	98	75-125	NJ
PCB-015	50	14.21	99	75-125	
PCB-019	50	12.55	100	75-125	
PCB-037	50	18.16	111	75-125	
PCB-054	50	14.41	106	75-125	
PCB-081	50	21.77	87	75-125	
PCB-077	50	22.06	93	75-125	
PCB-104	50	17.47	97	75-125	
PCB-123	50	23.06	110	75-125	
PCB-118	50	23.25	92	75-125	
PCB-114	50	23.54	95	75-125	
PCB-105	50	23.89	99	75-125	
PCB-126	50	25.48	99	75-125	
PCB-155	50	20.47	98	75-125	
PCB-167	50	26.40	97	75-125	
PCB-156/157	100	27.02	96	75-125	
PCB-169	50	28.68	98	75-125	
PCB-188	50	23.49	86	75-125	
PCB-189	50	29.98	104	75-125	
PCB-202	50	26.27	101	75-125	
PCB-205	50	31.38	96	75-125	
PCB-208	50	29.70	96	75-125	
PCB-206	50	32.46	98	75-125	
PCB-209	50	33.60	103	75-125	
Extraction Standards		**Time**	**% Rec**	**Limits**	
13C12-PCB-001	100	8.82	104	50-145	
13C12-PCB-003	100	10.34	97	50-145	
13C12-PCB-004	100	10.52	103	50-145	
13C12-PCB-015	100	14.21	115	50-145	
13C12-PCB-019	100	12.53	95	50-145	
13C12-PCB-037	100	18.16	107	50-145	
13C12-PCB-054	100	14.39	101	50-145	
13C12-PCB-081	100	21.75	110	50-145	
13C12-PCB-077	100	22.04	105	50-145	
13C12-PCB-104	100	17.46	102	50-145	
13C12-PCB-123	100	23.05	119	50-145	
13C12-PCB-118	100	23.23	118	50-145	
13C12-PCB-114	100	23.52	120	50-145	
13C12-PCB-105	100	23.87	119	50-145	
13C12-PCB-126	100	25.46	119	50-145	
13C12-PCB-155	100	20.46	96	50-145	
13C12-PCB-167	100	26.38	105	50-145	
13C12-PCB-156/157	200	27.01	105	50-145	
13C12-PCB-169	100	28.68	105	50-145	
13C12-PCB-188	100	23.48	100	50-145	
13C12-PCB-189	100	29.97	113	50-145	
13C12-PCB-202	100	26.25	101	50-145	
13C12-PCB-205	100	31.37	109	50-145	
13C12-PCB-208	100	29.69	99	50-145	
13C12-PCB-206	100	32.44	105	50-145	
13C12-PCB-209	100	33.59	144	50-145	
Cleanup Standards					
13C12-PCB-028	100	15.92	106	65-135	
13C12-PCB-111	100	21.99	101	75-125	
13C12-PCB-178	100	25.05	105	75-125	

NJ	Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.

1435 Norjohn Court, Unit 1, Burlington, ON, Canada L7L 0E6

SVOC DATA PACKAGE

SECTION 5: QC SAMPLE DATA

Including:

- Laboratory Method Blank Analysis Reports
- Laboratory Control Sample Analysis Reports
- Matrix Spike Analysis Reports
- Other QC Sample Analysis Reports (where applicable)

ALS Life sciences

Laboratory Method Blank Analysis Report

Sample Name	**Method Blank**	Sampling Date	n/a		
ALS Sample ID	WG2539476-1	Extraction Date	19-Jun-17		Approved:
Analysis Method	EPA 1668C	Sample Size	5	g	*E. Sabljic*
Analysis Type	Blank	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170626A11
Run Date	26-Jun-17 19:45
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	TEF (WHO 2005)	Ret. Time	Conc. pg/g	EDL pg/g	Flags	EMPC pg/g	LQL
PCB-001		8.83	<0.21	0.088	J,NJ	0.21	5.0
PCB-002		NotFnd	<0.087	0.087	UJ		5.0
PCB-003		10.36	0.595	0.096	J		5.0
PCB-004		10.54	0.639	0.16	J		5.0
PCB-010		NotFnd	<0.099	0.099	UJ		5.0
PCB-009		11.81	0.263	0.096	J		5.0
PCB-007		11.92	<0.12	0.089	J,NJ	0.12	5.0
PCB-006		12.07	<0.29	0.092	J,NJ	0.29	5.0
PCB-005		NotFnd	<0.10	0.10	UJ		5.0
PCB-008		12.35	1.88	0.095	J		5.0
PCB-014		NotFnd	<0.086	0.086	UJ		5.0
PCB-011		13.85	21.9	0.096			5.0
PCB-012/013		14.05	0.398	0.098	J		5.0
PCB-015		14.23	1.27	0.084	J		5.0
PCB-019		NotFnd	<0.11	0.11	UJ		5.0
PCB-018/030		13.67	1.33	0.061	J		5.0
PCB-017		13.91	0.855	0.081	J		5.0
PCB-027		14.05	<0.12	0.050	J,NJ	0.12	5.0
PCB-024		NotFnd	<0.052	0.052	UJ		5.0
PCB-016		14.21	<0.81	0.095	M,J,NJ	0.81	5.0
PCB-032		14.49	0.648	0.044	M,J		5.0
PCB-034		NotFnd	<0.082	0.082	UJ		5.0
PCB-023		NotFnd	<0.084	0.084	UJ		5.0
PCB-026/029		15.46	<0.49	0.096	J,NJ	0.49	5.0
PCB-025		15.59	<0.23	0.075	J,NJ	0.23	5.0
PCB-031		15.77	3.25	0.075	J		5.0
PCB-020/028		15.96	4.81	0.086	J		5.0
PCB-021/033		16.09	2.37	0.079	J		5.0
PCB-022		16.32	1.73	0.089	J		5.0
PCB-036		17.14	0.133	0.072	J		5.0
PCB-039		NotFnd	<0.085	0.085	UJ		5.0
PCB-038		NotFnd	<0.079	0.079	UJ		5.0
PCB-035		17.95	1.26	0.084	J		5.0
PCB-037		18.18	2.65	0.082	J		5.0
PCB-054		NotFnd	<0.051	0.051	UJ		5.0
PCB-050/053		15.63	0.241	0.072	J		5.0
PCB-045/051		16.04	<1.0	0.075	J,NJ	1.0	5.0
PCB-046		16.22	0.205	0.092	J		5.0
PCB-052		16.94	2.91	0.078	J		5.0
PCB-073		NotFnd	<0.051	0.051	UJ		5.0
PCB-043		NotFnd	<0.090	0.090	UJ		5.0
PCB-049/069		17.22	<1.2	0.060	J,NJ	1.2	5.0
PCB-048		17.39	<0.45	0.074	J,NJ	0.45	5.0
PCB-044/047/065		17.52	<5.6	0.069	NJ	5.6	5.0
PCB-059/062/075		17.69	0.315	0.056	J		5.0
PCB-042		17.82	0.791	0.078	J		5.0
PCB-040/041/071		18.08	1.92	0.074	J		5.0
PCB-064		18.20	1.62	0.053	J		5.0
PCB-072		NotFnd	<0.10	0.10	UJ		5.0
PCB-068		18.78	0.651	0.086	J		5.0
PCB-057		NotFnd	<0.098	0.098	UJ		5.0
PCB-058		NotFnd	<0.10	0.10	UJ		5.0
PCB-067		NotFnd	<0.095	0.095	UJ		5.0
PCB-063		19.38	<0.11	0.099	J,NJ	0.11	5.0
PCB-061/070/074/076		19.56	6.57	0.11			5.0
PCB-066		19.74	3.85	0.10	J		5.0
PCB-055		NotFnd	<0.11	0.11	UJ		5.0
PCB-056		20.12	1.88	0.10	J		5.0
PCB-060		20.23	1.46	0.10	J		5.0
PCB-080		NotFnd	<0.10	0.10	UJ		5.0
PCB-079		NotFnd	<0.095	0.095	UJ		5.0
PCB-078		NotFnd	<0.10	0.10	UJ		5.0
PCB-081	0.0003	NotFnd	<0.086	0.086	UJ		5.0
PCB-077	0.0001	22.08	0.457	0.091	J		5.0
PCB-104		NotFnd	<0.027	0.027	UJ		5.0
PCB-096		NotFnd	<0.025	0.025	UJ		5.0
PCB-103		NotFnd	<0.079	0.079	UJ		5.0
PCB-094		NotFnd	<0.090	0.090	UJ		5.0
PCB-095		19.10	1.68	0.093	J		5.0
PCB-093/098/100/102		19.27	<0.085	0.085	UJ	0.076	5.0

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Laboratory Method Blank Analysis Report

Sample Name	**Method Blank**	Sampling Date	n/a		
ALS Sample ID	WG2539476-1	Extraction Date	19-Jun-17		Approved:
Analysis Method	EPA 1668C	Sample Size	5	g	*E. Sabljic*
Analysis Type	Blank	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170626A11
Run Date	26-Jun-17 19:45
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
PCB-088/091		19.56	<0.39	0.088	J,NJ	0.39	5.0
PCB-084		19.71	0.674	0.10	J		5.0
PCB-089		NotFnd	<0.092	0.092	UJ		5.0
PCB-121		NotFnd	<0.061	0.061	UJ		5.0
PCB-092		20.33	0.405	0.089	J		5.0
PCB-090/101/113		20.62	2.19	0.079	J		5.0
PCB-083/099		20.93	<1.2	0.084	J,NJ	1.2	5.0
PCB-112		NotFnd	<0.074	0.074	UJ		5.0
PCB-086/087/097/109/119/125		21.29	1.79	0.078	M,J		5.0
PCB-085/110/115/116/117		21.70	3.58	0.071	M,J		5.0
PCB-082		21.90	<0.45	0.10	J,NJ	0.45	5.0
PCB-111		NotFnd	<0.065	0.065	UJ		5.0
PCB-120		NotFnd	<0.063	0.063	UJ		5.0
PCB-108/124		22.90	<0.071	0.054	J,NJ	0.071	5.0
PCB-107		23.03	<0.11	0.052	M,J,NJ	0.11	5.0
PCB-123	0.00003	23.06	<0.052	0.052	M,UJ	0.035	5.0
PCB-106		NotFnd	<0.057	0.057	UJ		5.0
PCB-118	0.00003	23.25	1.76	0.048	J		5.0
PCB-122		NotFnd	<0.059	0.059	UJ		5.0
PCB-114	0.00003	NotFnd	<0.049	0.049	UJ		5.0
PCB-105	0.00003	23.90	0.883	0.049	J		5.0
PCB-127		NotFnd	<0.054	0.054	UJ		5.0
PCB-126	0.1	NotFnd	<0.052	0.052	UJ		5.0
PCB-155		20.49	0.118	0.029	J		5.0
PCB-152		NotFnd	<0.029	0.029	UJ		5.0
PCB-150		NotFnd	<0.030	0.030	UJ		5.0
PCB-136		20.95	0.252	0.031	J		5.0
PCB-145		NotFnd	<0.032	0.032	UJ		5.0
PCB-148		NotFnd	<0.041	0.041	UJ		5.0
PCB-135/151		22.17	<0.48	0.040	J,NJ	0.48	5.0
PCB-154		NotFnd	<0.038	0.038	UJ		5.0
PCB-144		NotFnd	<0.039	0.039	UJ		5.0
PCB-147/149		22.65	1.64	0.081	J		5.0
PCB-134/143		NotFnd	<0.091	0.091	UJ		5.0
PCB-139/140		22.97	<0.084	0.084	UJ	0.080	5.0
PCB-131		NotFnd	<0.090	0.090	UJ		5.0
PCB-142		NotFnd	<0.093	0.093	UJ		5.0
PCB-132		23.34	0.710	0.086	J		5.0
PCB-133		NotFnd	<0.088	0.088	UJ		5.0
PCB-165		NotFnd	<0.069	0.069	UJ		5.0
PCB-146		23.89	0.308	0.079	J		5.0
PCB-161		NotFnd	<0.067	0.067	UJ		5.0
PCB-153/168		24.20	1.51	0.070	J		5.0
PCB-141		NotFnd	<0.097	0.097	UJ		5.0
PCB-130		24.54	<0.12	0.097	J,NJ	0.12	5.0
PCB-137/164		24.66	0.271	0.080	M,J		5.0
PCB-129/138/163		24.87	1.79	0.085	J		5.0
PCB-160		NotFnd	<0.064	0.064	UJ		5.0
PCB-158		25.09	<0.14	0.067	J,NJ	0.14	5.0
PCB-128/166		25.58	<0.23	0.077	J,NJ	0.23	5.0
PCB-159		NotFnd	<0.065	0.065	UJ		5.0
PCB-162		NotFnd	<0.067	0.067	UJ		5.0
PCB-167	0.00003	26.40	<0.058	0.058	UJ	0.047	5.0
PCB-156/157	0.00003	27.02	<0.12	0.072	J,NJ	0.12	10
PCB-169	0.03	NotFnd	<0.067	0.067	UJ		5.0
PCB-188		NotFnd	<0.042	0.042	UJ		5.0
PCB-179		23.72	0.206	0.050	J		5.0
PCB-184		23.95	0.101	0.045	J		5.0
PCB-176		NotFnd	<0.048	0.048	UJ		5.0
PCB-186		NotFnd	<0.051	0.051	UJ		5.0
PCB-178		NotFnd	<0.068	0.068	UJ		5.0
PCB-175		NotFnd	<0.064	0.064	UJ		5.0
PCB-187		25.55	0.322	0.055	J		5.0
PCB-182		NotFnd	<0.067	0.067	UJ		5.0
PCB-183		25.86	0.173	0.067	J		5.0
PCB-185		NotFnd	<0.065	0.065	UJ		5.0
PCB-174		26.02	0.244	0.073	J		5.0
PCB-177		26.25	<0.12	0.069	J,NJ	0.12	5.0
PCB-181		NotFnd	<0.068	0.068	UJ		5.0
PCB-171/173		26.58	<0.13	0.075	J,NJ	0.13	5.0
PCB-172		NotFnd	<0.073	0.073	UJ		5.0

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Laboratory Method Blank Analysis Report

Sample Name	**Method Blank**	Sampling Date	n/a		
ALS Sample ID	WG2539476-1	Extraction Date	19-Jun-17		Approved:
Analysis Method	EPA 1668C	Sample Size	5	g	*E. Sabljic*
Analysis Type	Blank	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170626A11
Run Date	26-Jun-17 19:45
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
PCB-192		NotFnd	<0.062	0.062	UJ		5.0
PCB-180/193		27.71	<0.42	0.063	J,NJ	0.42	5.0
PCB-191		NotFnd	<0.055	0.055	UJ		5.0
PCB-170		28.39	0.230	0.075	J		5.0
PCB-190		NotFnd	<0.052	0.052	UJ		5.0
PCB-189	0.00003	NotFnd	<0.073	0.073	UJ		5.0
PCB-202		NotFnd	<0.050	0.050	UJ		5.0
PCB-201		NotFnd	<0.047	0.047	UJ		5.0
PCB-204		NotFnd	<0.043	0.043	UJ		5.0
PCB-197		NotFnd	<0.047	0.047	UJ		5.0
PCB-200		NotFnd	<0.045	0.045	UJ		5.0
PCB-198/199		28.72	0.207	0.067	J		5.0
PCB-196		NotFnd	<0.071	0.071	UJ		5.0
PCB-203		NotFnd	<0.063	0.063	UJ		5.0
PCB-195		NotFnd	<0.12	0.12	UJ		5.0
PCB-194		NotFnd	<0.12	0.12	UJ		5.0
PCB-205		NotFnd	<0.081	0.081	UJ		5.0
PCB-208		NotFnd	<0.20	0.20	UJ		5.0
PCB-207		NotFnd	<0.22	0.22	UJ		5.0
PCB-206		NotFnd	<0.37	0.37	UJ		5.0
PCB-209		33.62	<0.16	0.085	J,NJ	0.16	5.0

Extraction Standards	**pg**	**Time**	**% Rec**	**Limits**
13C12-PCB-001	2000	8.82	43	5-145
13C12-PCB-003	2000	10.36	40	5-145
13C12-PCB-004	2000	10.52	49	5-145
13C12-PCB-015	2000	14.23	65	5-145
13C12-PCB-019	2000	12.53	50	5-145
13C12-PCB-037	2000	18.16	66	5-145
13C12-PCB-054	2000	14.41	53	5-145
13C12-PCB-081	2000	21.77	71	5-145
13C12-PCB-077	2000	22.06	70	5-145
13C12-PCB-104	2000	17.47	60	5-145
13C12-PCB-123	2000	23.06	81	5-145
13C12-PCB-118	2000	23.25	80	5-145
13C12-PCB-114	2000	23.54	80	5-145
13C12-PCB-105	2000	23.89	81	5-145
13C12-PCB-126	2000	25.48	78	5-145
13C12-PCB-155	2000	20.47	61	5-145
13C12-PCB-167	2000	26.40	71	5-145
13C12-PCB-156/157	4000	27.02	73	5-145
13C12-PCB-169	2000	28.68	69	5-145
13C12-PCB-188	2000	23.49	70	5-145
13C12-PCB-189	2000	29.98	74	5-145
13C12-PCB-202	2000	26.27	49	5-145
13C12-PCB-205	2000	31.38	74	5-145
13C12-PCB-208	2000	29.70	72	5-145
13C12-PCB-206	2000	32.46	72	5-145
13C12-PCB-209	2000	33.60	101	5-145

Cleanup Standards				
13C12-PCB-028	2000	15.94	69	5-145
13C12-PCB-111	2000	22.01	69	5-145
13C12-PCB-178	2000	25.05	70	5-145

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Laboratory Method Blank Analysis Report

Sample Name	**Method Blank**	Sampling Date	n/a		
ALS Sample ID	WG2539476-1	Extraction Date	19-Jun-17		Approved:
Analysis Method	EPA 1668C	Sample Size	5	g	*E. Sabljic*
Analysis Type	Blank	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170626A11
Run Date	26-Jun-17 19:45
Final Volume	25 ul
Dilution Factor	1
Analysis Units	pg/g
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	**TEF (WHO 2005)**	**Ret. Time**	**Conc. pg/g**	**EDL pg/g**	**Flags**	**EMPC pg/g**	**LQL**
Homologue Group Totals							
Total MonoCB			0.805	0.087	J		5.0
Total DiCB			26.8	0.084	J		5.0
Total TriCB			20.7	0.044	J		5.0
Total TetraCB			31.2	0.051	J		5.0
Total PentaCB			15.2	0.025	J		5.0
Total HexaCB			7.69	0.029	J		5.0
Total HeptaCB			1.95	0.042	J		5.0
Total OctaCB			0.207	0.043	J		5.0
Total NonaCB			<0.20	0.20	UJ		5.0
DecaCB			0.160	0.085	J		5.0
Total PCB			105		J		
Toxic Equivalency - (WHO 2005)							
Lower Bound PCB TEQ			0.000125				
Mid Point PCB TEQ			0.00375				
Upper Bound PCB TEQ			0.00737				

EDL	Indicates the Estimated Detection Limit, based on the measured background noise for this target in this sample.
TEF	Indicates the Toxic Equivalency Factor TEQ Indicates the Toxic Equivalency
LQL	Lower Quantification Limit, based on the lowest calibration level corrected for sample size, splits and dilutions.
M	Indicates that a peak has been manually integrated.
UJ	Indicates that this compound was not detected above the EDL.
J	indicates that the analyte was positively identifed. The associated numerical result is an estimate.
NJ	Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.
EMPC	Estimated Maximum Possible Concentration – elevated detection limit due to interference or positive id criterion failure

ALS Life sciences

Laboratory Control Sample Analysis Report

Sample Name	**Laboratory Control Sample**	Sampling Date	n/a		
ALS Sample ID	WG2539476-2	Extraction Date	19-Jun-17		Approved:
Analysis Method	EPA 1668C	Sample Size	1	n/a	*E. Sabljic*
Analysis Type	LCS	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170622B02
Run Date	22-Jun-17 19:06
Final Volume	25 ul
Dilution Factor	1
Analysis Units	% Rec
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	**pg**	**Ret. Time**	**% Rec**	**Limits**	**Flags**
PCB-001	1000	8.85	107	15-145	
PCB-003	1000	10.39	109	15-145	
PCB-004	1000	10.56	106	15-145	
PCB-015	1000	14.24	117	15-145	
PCB-019	1000	12.58	107	15-145	
PCB-037	1000	18.20	87	15-145	
PCB-054	1000	14.44	105	15-145	
PCB-081	1000	21.80	92	15-145	
PCB-077	1000	22.09	94	15-145	
PCB-104	1000	17.50	97	15-145	
PCB-123	1000	23.10	108	15-145	
PCB-118	1000	23.26	102	15-145	
PCB-114	1000	23.57	102	15-145	
PCB-105	1000	23.92	100	15-145	
PCB-126	1000	25.51	107	15-145	
PCB-155	1000	20.51	102	15-145	
PCB-167	1000	26.42	94	15-145	
PCB-156/157	2000	27.06	93	15-145	
PCB-169	1000	28.72	93	15-145	
PCB-188	1000	23.52	89	15-145	
PCB-189	1000	30.00	100	15-145	
PCB-202	1000	26.30	102	15-145	
PCB-205	1000	31.42	96	15-145	
PCB-208	1000	29.74	90	15-145	
PCB-206	1000	32.51	101	15-145	
PCB-209	1000	33.65	120	15-145	
Extraction Standards		**Time**	**% Rec**	**Limits**	
13C12-PCB-001	2000	8.85	7	5-145	
13C12-PCB-003	2000	10.38	7	5-145	
13C12-PCB-004	2000	10.54	7	5-145	
13C12-PCB-015	2000	14.24	9	5-145	
13C12-PCB-019	2000	12.56	6	5-145	
13C12-PCB-037	2000	18.18	11	5-145	
13C12-PCB-054	2000	14.42	8	5-145	
13C12-PCB-081	2000	21.78	12	5-145	
13C12-PCB-077	2000	22.08	12	5-145	
13C12-PCB-104	2000	17.49	9	5-145	
13C12-PCB-123	2000	23.08	12	5-145	NJ
13C12-PCB-118	2000	23.26	12	5-145	
13C12-PCB-114	2000	23.56	13	5-145	
13C12-PCB-105	2000	23.90	13	5-145	
13C12-PCB-126	2000	25.50	12	5-145	
13C12-PCB-155	2000	20.49	6	5-145	
13C12-PCB-167	2000	26.42	10	5-145	
13C12-PCB-156/157	4000	27.04	10	5-145	
13C12-PCB-169	2000	28.70	10	5-145	
13C12-PCB-188	2000	23.51	10	5-145	
13C12-PCB-189	2000	30.00	11	5-145	
13C12-PCB-202	2000	26.28	9	5-145	
13C12-PCB-205	2000	31.40	9	5-145	
13C12-PCB-208	2000	29.74	9	5-145	
13C12-PCB-206	2000	32.49	9	5-145	
13C12-PCB-209	2000	33.64	7	5-145	
Cleanup Standards					
13C12-PCB-028	2000	15.96	12	5-145	
13C12-PCB-111	2000	22.03	10	5-145	
13C12-PCB-178	2000	25.09	10	5-145	

NJ Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.

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Matrix Spike Sample Analysis Report

Sample Name	**Matrix Spike**	Sampling Date	n/a		
ALS Sample ID	WG2539476-5	Extraction Date	19-Jun-17		Approved:
Analysis Method	EPA 1668C	Sample Size	1	n/a	*E. Sabljic*
Analysis Type	LCS	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170622B03
Run Date	22-Jun-17 19:45
Final Volume	25 ul
Dilution Factor	1
Analysis Units	% Rec
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	**pg**	**Ret. Time**	**% Rec**	**Limits**	**Flags**
PCB-001	1000	8.83	109	60-140	
PCB-003	1000	10.38	113	60-140	
PCB-004	1000	10.54	108	60-140	
PCB-015	1000	14.23	122	60-140	
PCB-019	1000	12.56	115	60-140	
PCB-037	1000	18.20	101	60-140	
PCB-054	1000	14.42	109	60-140	
PCB-081	1000	21.78	96	60-140	
PCB-077	1000	22.08	101	60-140	
PCB-104	1000	17.49	99	60-140	
PCB-123	1000	23.08	161	60-140	
PCB-118	1000	23.26	453	60-140	
PCB-114	1000	23.56	111	60-140	
PCB-105	1000	23.90	215	60-140	
PCB-126	1000	25.50	111	60-140	
PCB-155	1000	20.51	109	60-140	
PCB-167	1000	26.42	117	60-140	
PCB-156/157	2000	27.04	113	60-140	
PCB-169	1000	28.70	98	60-140	
PCB-188	1000	23.51	92	60-140	
PCB-189	1000	30.00	116	60-140	
PCB-202	1000	26.28	128	60-140	
PCB-205	1000	31.40	97	60-140	
PCB-208	1000	29.74	112	60-140	
PCB-206	1000	32.49	132	60-140	
PCB-209	1000	33.65	166	60-140	
Extraction Standards		**Time**	**% Rec**	**Limits**	
13C12-PCB-001	2000	8.83	58	5-145	
13C12-PCB-003	2000	10.36	51	5-145	
13C12-PCB-004	2000	10.54	56	5-145	
13C12-PCB-015	2000	14.23	55	5-145	
13C12-PCB-019	2000	12.55	48	5-145	
13C12-PCB-037	2000	18.18	57	5-145	
13C12-PCB-054	2000	14.41	52	5-145	
13C12-PCB-081	2000	21.77	68	5-145	
13C12-PCB-077	2000	22.06	64	5-145	
13C12-PCB-104	2000	17.49	59	5-145	
13C12-PCB-123	2000	23.08	71	5-145	
13C12-PCB-118	2000	23.25	70	5-145	
13C12-PCB-114	2000	23.54	71	5-145	
13C12-PCB-105	2000	23.89	69	5-145	
13C12-PCB-126	2000	25.48	67	5-145	
13C12-PCB-155	2000	20.49	34	5-145	
13C12-PCB-167	2000	26.40	60	5-145	
13C12-PCB-156/157	4000	27.02	59	5-145	
13C12-PCB-169	2000	28.70	59	5-145	
13C12-PCB-188	2000	23.49	58	5-145	
13C12-PCB-189	2000	29.98	61	5-145	
13C12-PCB-202	2000	26.27	56	5-145	
13C12-PCB-205	2000	31.38	58	5-145	
13C12-PCB-208	2000	29.72	55	5-145	
13C12-PCB-206	2000	32.48	59	5-145	
13C12-PCB-209	2000	33.62	47	5-145	
Cleanup Standards					
13C12-PCB-028	2000	15.94	67	5-145	
13C12-PCB-111	2000	22.01	65	5-145	
13C12-PCB-178	2000	25.07	69	5-145	

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Matrix Spike Sample Analysis Report

Sample Name	**Matrix Spike Duplicate**	Sampling Date	n/a		
ALS Sample ID	WG2539476-6	Extraction Date	19-Jun-17		Approved:
Analysis Method	EPA 1668C	Sample Size	1	n/a	*E. Sabljic*
Analysis Type	LCS	Percent Moisture	n/a		--e-signature--
Sample Matrix	QC	Split Ratio	1		28-Jun-2017

Run Information	**Run 1**
Filename	5-170622B04
Run Date	22-Jun-17 20:25
Final Volume	25 ul
Dilution Factor	1
Analysis Units	% Rec
Instrument - Column	HRMS5 SPBOCTYL60164-03B

Target Analytes	**pg**	**Ret. Time**	**% Rec**	**Limits**	**Flags**
PCB-001	1000	8.85	109	60-140	
PCB-003	1000	10.38	112	60-140	
PCB-004	1000	10.56	108	60-140	
PCB-015	1000	14.24	120	60-140	
PCB-019	1000	12.56	114	60-140	
PCB-037	1000	18.20	102	60-140	
PCB-054	1000	14.44	109	60-140	
PCB-081	1000	21.78	96	60-140	
PCB-077	1000	22.09	100	60-140	
PCB-104	1000	17.50	98	60-140	
PCB-123	1000	23.10	146	60-140	NJ
PCB-118	1000	23.26	462	60-140	
PCB-114	1000	23.57	113	60-140	
PCB-105	1000	23.92	220	60-140	
PCB-126	1000	25.51	111	60-140	
PCB-155	1000	20.51	103	60-140	
PCB-167	1000	26.42	118	60-140	
PCB-156/157	2000	27.06	114	60-140	
PCB-169	1000	28.72	96	60-140	
PCB-188	1000	23.52	93	60-140	
PCB-189	1000	30.01	118	60-140	
PCB-202	1000	26.30	128	60-140	
PCB-205	1000	31.42	98	60-140	
PCB-208	1000	29.75	111	60-140	
PCB-206	1000	32.51	136	60-140	
PCB-209	1000	33.65	166	60-140	
Extraction Standards		**Time**	**% Rec**	**Limits**	
13C12-PCB-001	2000	8.83	57	5-145	
13C12-PCB-003	2000	10.38	45	5-145	
13C12-PCB-004	2000	10.54	56	5-145	
13C12-PCB-015	2000	14.23	55	5-145	
13C12-PCB-019	2000	12.55	49	5-145	
13C12-PCB-037	2000	18.18	58	5-145	
13C12-PCB-054	2000	14.42	55	5-145	
13C12-PCB-081	2000	21.78	69	5-145	
13C12-PCB-077	2000	22.08	66	5-145	
13C12-PCB-104	2000	17.49	62	5-145	
13C12-PCB-123	2000	23.08	77	5-145	
13C12-PCB-118	2000	23.26	75	5-145	
13C12-PCB-114	2000	23.56	77	5-145	
13C12-PCB-105	2000	23.90	73	5-145	NJ
13C12-PCB-126	2000	25.50	73	5-145	
13C12-PCB-155	2000	20.49	9	5-145	
13C12-PCB-167	2000	26.42	63	5-145	
13C12-PCB-156/157	4000	27.04	65	5-145	
13C12-PCB-169	2000	28.70	65	5-145	
13C12-PCB-188	2000	23.51	44	5-145	
13C12-PCB-189	2000	30.00	68	5-145	
13C12-PCB-202	2000	26.28	60	5-145	
13C12-PCB-205	2000	31.40	63	5-145	
13C12-PCB-208	2000	29.74	50	5-145	
13C12-PCB-206	2000	32.49	65	5-145	
13C12-PCB-209	2000	33.64	32	5-145	
Cleanup Standards					
13C12-PCB-028	2000	15.94	69	5-145	
13C12-PCB-111	2000	22.01	67	5-145	
13C12-PCB-178	2000	25.09	77	5-145	

NJ Indicates that the ion abundance ratio for this analyte did not meet the control limit. The reported value represents an estimated concentration.

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SECTION 6: INTERNAL RECORDS

Including:

- Prep Logs
- Independent calculation checks
- Others as listed below:

MDL Data

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Sample Calculation Report

Approved: *E. Sabljic* --e-signature-- 28-Jun-2017

CS3 RRF Check

$$RRF = \frac{\text{Response of PCB-118}}{\text{Response of 13C12-PCB-118}} \times \frac{\text{Concentration of 13C12-PCB-118}}{\text{Concentration of PCB-118}}$$

							Calculated Value	Value from TargetLynx
RRF	**=**	**595644.30** / **857943.90**	**x**	**100** / **50**	**=**		**1.39**	**1.39**

Calculation of PCB-118 amount in WG2539476-4

$$pg/g = \frac{\text{Response of PCB-118}}{\text{Response of 13C12-PCB-118}} \times \frac{\text{pg of 13C12-PCB-118 spiked}}{\text{Mean RRF} * \text{Sample Size}}$$

pg/g	**=**	**2775405** / **1429742.5**	**x**	**2000** / **1.24**	*****	**4.78**	**=**	**653**	**653**

Calculation of 13C12-PCB-118 Recovery in WG2539476-4

$$\%\ Recovery = \frac{\text{Response of 13C12-PCB-118}}{\text{Response of 13C12-PCB-101}} \times \frac{\text{pg of 13C12-PCB-101 spiked} * 100}{\text{Mean RRF} * \text{pg 13C12-PCB-118 Spiked}}$$

% Recovery	**=**	**1429742.5** / **1999169.9**	**x**	**2000** / **0.93**	*****	**100** / **2000**	**=**	**77**	**77 %**

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Sample Calculation Report - EMPC

Approved: *S. kennedy* --e-signature-- 30-Jun-2017

Instrument Output Tab: CSH-1-2-1 BIOCLARK'S FRY 2.0MM FISH FEED - PELLETS

Target Analyte: * PCB-1

Calculation of EMPC for * PCB-1 in CSH-1-2-1 BIOCLARK'S FRY 2.0MM FISH FEED - PELLETS

Raf= Ratio Found =	3.73			
Rat = Ratio Theoretical =	3.13			
N1 = Area of Native Ion 1 =	2285.1			
N2 = Area of Native Ion 2 =	612.6			
ES = Extraction Internal Std Area (sum) =	1056342.2			
ESspk = Amount of ES Spiked =	2000	pg	ES level	1
Sample Size =	4.8	4.8		
RRFav = Average RRF of Native vs. ES =	0.874			

A. In the case where the ion ratio is too high:

Assume Ion 1 is elevated by an interference:

$$\frac{N1corr}{N2} = Rat$$

$$N1corr = Rat * N2$$
$$= 3.13 * 612.6 = 1917.438$$

Where N1corr is the area of Native Ion 1 extrapolated from Native Area 2 and the Theoretical Ion Ratio

$$EMPC\ (pg/4.8) = \frac{N1corr + N2}{ES} \times \frac{ESspk}{RRFav} \times \frac{1}{Size\ (4.8)}$$

$$= \frac{1917.438 + 612.6}{1056342.2} \times \frac{2000}{0.874} \times \frac{1}{4.8}$$

$$= 1.142$$

A. In the case where the ion ratio is too low:

Assume Ion 2 is elevated by an interference:

$$\frac{N1}{N2corr} = Rat$$

$$N2corr = \frac{N1}{Rat}$$
$$= (2285.1/3.13) = N/A$$

Where N2corr is the area of Native Ion 2 extrapolated from Native Area 1 and the Theoretical Ion Ratio

$$EMPC\ (pg/4.8) = \frac{N1 + N2corr}{ES} \times \frac{ESspk}{RRFav} \times \frac{1}{Size\ (4.8)}$$

$$= \frac{2285.1 + N/A}{1056342.2} \times \frac{2000}{0.874} \times \frac{1}{4.8}$$

$$= N/A$$

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SECTION 7: SHIPPING/RECEIVING DOCUMENTS

Including:

- Chain-of-Custody Records
- Sample Log-in Sheet(s) - where applicable
- Others as listed below:

1668A/C MDLs

PCB Target Analytes	Soils/Sediments/Solids/Tissues pg/g [1.]			Waters pg/L [3.]		
	MDL[4.]	LOQ	Contract Required Reporting Limit	MDL[4.]	LOQ	Contract Required Reporting Limit
PCB-001	0.06	**0.5**	20	1.7	**5**	20
PCB-002	0.13	0.5	20	1.4	5	20
PCB-003	0.10	**0.5**	20	2.2	**5**	20
PCB-004	0.07	**0.5**	20	5.1	**5**	20
PCB-010	0.05	0.5	20	3.1	5	20
PCB-009	0.08	0.5	20	3.4	5	20
PCB-007	0.08	0.5	20	3.6	5	20
PCB-006	0.11	0.5	20	19.5	20	20
PCB-005	0.04	0.5	20	3.4	5	20
PCB-008	0.26	0.5	20	5.7	5	20
PCB-014	0.08	0.5	20	2.1	5	20
PCB-011	2.6	0.5	20	7.8	20	20
PCB-012/013	0.09	1	40	2.0	10	40
PCB-015	0.20	**0.5**	20	5.8	**10**	20
PCB-019	0.04	**0.5**	20	2.4	**5**	20
PCB-018/030	0.22	1	40	6.0	10	40
PCB-017	0.08	0.5	20	2.7	5	20
PCB-027	0.04	0.5	20	1.6	5	20
PCB-024	0.07	0.5	20	1.3	5	20
PCB-016	0.09	0.5	20	2.5	5	20
PCB-032	0.04	0.5	20	1.6	5	20
PCB-034	0.05	0.5	20	1.5	5	20
PCB-023	0.04	0.5	20	1.2	5	20
PCB-026/029	0.07	1	40	3.4	10	40
PCB-025	0.06	0.5	20	2.3	5	20
PCB-031	0.14	0.5	20	7.6	5	20
PCB-020/028	0.15	1	40	10.8	10	40
PCB-021/033	0.12	1	40	5.3	10	40
PCB-022	0.10	0.5	20	3.7	5	20
PCB-036	0.03	0.5	20	1.1	5	20
PCB-039	0.07	0.5	20	0.7	5	20
PCB-038	0.06	0.5	20	1.4	5	20
PCB-035	0.08	0.5	20	4.6	5	20
PCB-037	0.08	**0.5**	20	7.3	**5**	20
PCB-054	0.05	**0.5**	20	1.8	**5**	20
PCB-050/053	0.20	1	40	5.7	10	40
PCB-045/051	0.13	1	40	5.0	10	40
PCB-046	0.09	0.5	20	2.0	5	20
PCB-052	0.25	0.5	20	11.0	20	20
PCB-073	0.10	0.5	20	1.8	5	20
PCB-043	0.17	1.5	20	1.6	15	20
PCB-049/069	0.29	1.5	40	6.7	15	40
PCB-048	0.11	0.5	20	2.4	5	20
PCB-044/047/065	0.36	3	60	16.8	30	60
PCB-059/062/075	0.22	3	60	4.2	30	60
PCB-042	0.14	0.5	20	1.9	5	20
PCB-040/041/071	0.24	1.5	60	4.3	15	60
PCB-064	0.10	0.5	20	3.5	5	20
PCB-072	0.06	0.5	20	2.4	5	20
PCB-068	0.15	0.5	20	2.0	5	20
PCB-057	0.08	0.5	20	2.0	5	20
PCB-058	0.11	0.5	20	1.2	5	20
PCB-067	0.11	0.5	20	2.2	5	20
PCB-063	0.07	0.5	20	2.3	5	20
PCB-061/070/074/076	0.32	2.5	100	16.6	25	100
PCB-066	0.38	2.5	20	9.8	25	20
PCB-055	0.13	0.5	20	2.2	5	20
PCB-056	0.10	0.5	20	2.1	5	20
PCB-060	0.11	0.5	20	1.5	5	20
PCB-080	0.10	0.5	20	1.8	5	20
PCB-079	0.10	0.5	20	1.7	5	20
PCB-078	0.10	0.5	20	2.5	5	20
PCB-081	0.20	**0.5**	20	1.9	**5**	20
PCB-077	0.11	**0.5**	20	1.8	**5**	20

1668A/C MDLs

PCB Target Analytes	Soils/Sediments/Solids/Tissues pg/g [1.]			Waters pg/L [3.]		
	MDL[4.]	LOQ	Contract Required Reporting Limit	MDL[4.]	LOQ	Contract Required Reporting Limit
PCB-104	0.08	**0.5**	20	2.6	**5**	20
PCB-096	0.09	0.5	20	2.7	5	20
PCB-103	0.08	0.5	20	0.8	5	20
PCB-094	0.11	0.5	20	1.5	5	20
PCB-095	0.13	0.5	20	8.4	10	20
PCB-093/098/100/102	0.30	3	80	7.0	30	80
PCB-088/091	0.43	3	40	2.6	30	40
PCB-084	0.09	0.5	20	1.5	5	20
PCB-089	0.12	0.5	20	1.6	5	20
PCB-121	0.10	0.5	20	1.7	5	20
PCB-092	0.13	0.5	20	0.9	5	20
PCB-090/101/113	0.41	2.5	60	17.0	25	60
PCB-083/099	0.47	2.5	40	9.8	25	40
PCB-112	0.09	0.5	20	1.5	5	20
PCB-086/087/097/109/119/125	0.25	5.5	120	13.3	50	120
PCB-085/110/115/116/117	1.36	5.5	100	25.9	50	100
PCB-082	0.08	0.5	20	2.5	5	20
PCB-111	0.07	0.5	20	1.8	5	20
PCB-120	0.11	0.5	20	1.8	5	20
PCB-108/124	0.18	1	40	2.8	10	40
PCB-107	0.11	0.5	20	3.0	5	20
PCB-123	0.10	**0.5**	20	2.4	**5**	20
PCB-106	0.07	0.5	20	1.7	5	20
PCB-118	0.89	**1**	20	3.2	**20**	20
PCB-122	0.11	0.5	20	2.6	5	20
PCB-114	0.08	**0.5**	20	2.2	**5**	20
PCB-105	0.36	**0.5**	20	11.9	**20**	20
PCB-127	0.13	0.5	20	2.8	5	20
PCB-126	0.06	**0.5**	20	2.4	**5**	20
PCB-155	0.04	**0.5**	20	1.2	**5**	20
PCB-152	0.13	0.5	20	3.4	5	20
PCB-150	0.08	0.5	20	2.3	5	20
PCB-136	0.13	0.5	20	2.8	5	20
PCB-145	0.07	0.5	20	3.0	5	20
PCB-148	0.05	0.5	20	1.9	5	20
PCB-135/151	0.14	1	40	5.9	10	40
PCB-154	0.08	0.5	20	1.7	5	20
PCB-144	0.05	0.5	20	2.5	5	20
PCB-147/149	1.38	2	40	13.6	20	40
PCB-134/143	0.12	1	40	4.1	10	40
PCB-139/140	0.15	1	40	4.0	10	40
PCB-131	0.15	0.5	20	1.7	5	20
PCB-142	0.05	0.5	20	1.1	5	20
PCB-132	0.24	0.5	20	4.7	5	20
PCB-133	0.07	0.5	20	0.9	5	20
PCB-165	0.10	0.5	20	1.4	5	20
PCB-146	0.17	0.5	20	1.3	5	20
PCB-161	0.08	0.5	20	2.0	5	20
PCB-153/168	0.37	1	40	11.3	20	40
PCB-141	0.09	0.5	20	2.9	5	20
PCB-130	0.04	0.5	20	1.5	5	20
PCB-137/164	0.07	1	40	3.9	10	40
PCB-129/138/163	0.53	1.5	60	17.7	20	60
PCB-160	0.05	0.5	20	4.5	5	20
PCB-158	0.23	0.5	20	2.2	5	20
PCB-128/166	0.18	1	40	2.0	10	40
PCB-159	0.10	0.5	20	1.2	5	20
PCB-162	0.03	0.5	20	1.8	5	20
PCB-167	0.05	**0.5**	20	1.3	**5**	20
PCB-156/157	0.06	**1**	40	1.9	**10**	40
PCB-169	0.11	**0.5**	20	1.4	**5**	20
PCB-188	0.02	**0.5**	20	1.5	**5**	20
PCB-179	0.15	0.5	20	2.9	5	20
PCB-184	0.23	0.5	20	1.3	5	20
PCB-176	0.19	0.5	20	2.2	5	20

1668A/C MDLs

PCB Target Analytes	Soils/Sediments/Solids/Tissues pg/g [1.]			Waters pg/L [3.]		
	MDL[4.]	LOQ	Contract Required Reporting Limit	MDL[4.]	LOQ	Contract Required Reporting Limit
PCB-186	0.18	0.5	20	2.4	5	20
PCB-178	0.06	0.5	20	1.4	5	20
PCB-175	0.14	0.5	20	1.7	5	20
PCB-187	0.17	0.5	20	7.1	5	20
PCB-182	0.13	0.5	20	1.2	5	20
PCB-183	0.12	0.5	20	3.7	5	20
PCB-185	0.15	0.5	20	1.4	5	20
PCB-174	0.22	0.5	20	6.2	5	20
PCB-177	0.15	0.5	20	2.0	5	20
PCB-181	0.21	0.5	20	2.1	5	20
PCB-171/173	0.30	1	40	3.6	10	40
PCB-172	0.17	0.5	20	2.0	5	20
PCB-192	0.11	0.5	20	1.2	5	20
PCB-180/193	0.37	1	40	17.3	20	40
PCB-191	0.18	0.5	20	1.2	5	20
PCB-170	0.12	0.5	20	7.5	10	20
PCB-190	0.22	0.5	20	1.6	5	20
PCB-189	0.13	**0.5**	20	1.3	**5**	20
PCB-202	0.06	**0.5**	20	1.4	**5**	20
PCB-201	0.19	0.5	20	1.2	5	20
PCB-204	0.06	0.5	20	2.5	5	20
PCB-197	0.08	0.5	20	2.9	5	20
PCB-200	0.09	0.5	20	2.2	5	20
PCB-198/199	0.24	1	40	3.7	10	40
PCB-196	0.08	0.5	20	2.5	5	20
PCB-203	0.08	0.5	20	2.5	5	20
PCB-195	0.46	0.5	20	1.5	5	20
PCB-194	0.12	0.5	20	4.1	5	20
PCB-205	0.13	**0.5**	20	1.9	**5**	20
PCB-208	0.14	**0.5**	20	1.2	**5**	20
PCB-207	0.15	0.5	20	1.3	5	20
PCB-206	0.13	**0.5**	20	2.8	**5**	20
PCB-209	0.14	**0.5**	20	1.7	**5**	20

1. Based upon a 10g sample size.
2. Based upon the entire sample extract with no split or archived fraction.
3. Based upon a 1L sample size.
4. MDL as per Part B to Appendix 136 of US Code of Registry Volume 40.

1613B & 8290A MDLs

	Soils/Sediments/Solids/Tissues pg/g [1.]			Waters pg/L [3.]		
PCDD/F Target Analytes	**MDL[4.]**	**LOQ**	**Required Reporting Limit**	**MDL[4.]**	**LOQ**	**Contract Required Reporting Limit**
2,3,7,8-TCDD	0.44	1	1.0	0.72	5	10
1,2,3,7,8-PeCDD	0.7	1		0.48	5	
1,2,3,4,7,8-HxCDD	0.2	1		0.53	5	
1,2,3,6,7,8-HxCDD	0.4	1		0.74	5	
1,2,3,7,8,9-HxCDD	0.6	1		0.44	5	
1,2,3,4,6,7,8-HpCDD	1.2	1		1.5	5	
OCDD	4.3	2		3.6	10	
2,3,7,8-TCDF	0.45	1		0.60	5	
1,2,3,7,8-PeCDF	0.7	1		0.69	5	
2,3,4,7,8-PeCDF	0.45	1		0.36	5	
1,2,3,4,7,8-HxCDF	0.7	1		0.60	5	
1,2,3,6,7,8-HxCDF	0.4	1		0.53	5	
1,2,3,7,8,9-HxCDF	0.7	1		0.69	5	
2,3,4,6,7,8-HxCDF	0.4	1		0.40	5	
1,2,3,4,6,7,8-HpCDF	0.8	1		0.58	5	
1,2,3,4,7,8,9-HpCDF	0.6	1		0.58	5	
OCDF	2.0	2		1.6	10	

1. Based upon a 10g sample size.
2. Based upon the entire sample extract with no split or archived fraction.
3. Based upon a 1L sample size.
4. MDL determined as per 40CFR Appendix B to Pt 136 Revision 2

ALS Burlington PBDE MDLs

Brominated Target Analyses

	Waters		Solids/Sed/Tissues	
	MDL	**Contract Required Reporting Limit**	**MDL**	**Contract Required Reporting Limit**
Sample Size	1L		20g	
Target BDPE Analytes	**pg/L**	**pg/L**	**pg/g**	**pg/g**
BDE-28/BDE-33	5	100	0.5	10000
BDE-47	16	2000	1.0	500000
BDE-66	5	100	0.3	10000
BDE-100	10	100	0.7	100000
BDE-99	15	2000	3.0	500000
BDE-85	6	120	0.6	10000
BDE-154	10	100	0.7	10000
BDE-153	6	120	0.4	10000
BDE-138/BDE-166	4	100	1.3	100000
BDE-183	8	100	0.5	10000
BDE-209	95	20000	6	5000000

[1.] Non-key targets included in the calibration standards but recovery of these targets can be poor due to potential losses in cleanup. Recovery of these targets is not guaranteed.
[2.] Quantitation Limit based upon the level of the low calibration standard.

CALA

Canadian Association for
Laboratory Accreditation Inc.

CALA Directory of Laboratories

Membership Number: 3508
Laboratory Name: ALS Environmental (Burlington)
Parent Institution: ALS Canada Ltd.
Address: 1435 Norjohn Court, Unit 1 Burlington ON L7L 0E6
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Phone: (905) 331-3111
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Email: quality.burlington@alsglobal.com; David.Gurdibaniuk@alsglobal.com

Standard: Conforms with requirements of ISO/IEC 17025:2017
Clients Served:
Revised On: September 8, 2021
Valid To: June 21, 2023

Scope of Accreditation

Air (Inorganic)
Anions and Cations - Air [Stack Emission] (016)
BU-TM-1005; modified from CTM-027 and EPA 0050 and EPA 0051 and EPA 26 and EPA 26A and EPA 6 and EPA 7A and EPA 7D and EPA 8 and EPA 9056 and EPA 9057

ION CHROMATOGRAPHY (IC)

Ammonia (NH3)

Bromine (Br2)

Chlorine

Hydrogen Bromide (HBr)

Hydrogen Chloride (HCl)

Hydrogen Fluoride (HF)

NOx

SOx

Air (Inorganic)
Mercury - Air (004)
BU-TM-1001, BU-TP-2001; modified from ASTM D6784-02 and EPA 0060 and EPA 101A and EPA 29 and EPA 7470

COLD VAPOUR ATOMIC ABSORPTION (CVAA)

Mercury

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Air (Inorganic)
Metals - Air (005)
BU-TM-1010, BU-TP-2001; modified from EPA 0060 and EPA 29 and EPA 6020
ICP/MS
Antimony
Arsenic
Barium
Cadmium
Chromium
Cobalt
Copper
Lead
Manganese
Nickel
Phosphorus
Selenium
Silver
Thallium
Vanadium
Zinc

Air (Inorganic)
Particulates - Air [Particulate] (039)
BU-TM-1008; modified from EPA 5 and EPA IO-3.1
GRAVIMETRIC
Particulates

Air (Organic)
Brominated Diphenyl Ethers (BDE) and Related Fire Retardants - Air (020)
BU-TM-1109, BU-TP-2109; modified from EPA 1614A
GC/HRMS
1,2-Bis(2,4,6-tribromophenoxy)ethane (BTBPE)
Decabromodiphenyl ethane
Hexabromobenzene (HBB)
PBDE 10 (2,6-Dibromodiphenyl ether)
PBDE 100 (2,2',4,4',6-Pentabromodiphenyl ether)
PBDE 105 (2,3,3',4,4'-Pentabromodiphenyl ether)
PBDE 11 (3,3'-Dibromodiphenyl ether)
PBDE 116 (2,3,4,5,6-Pentabromodiphenyl ether)
PBDE 118 (2,3',4,4',5-Pentabromodiphenyl ether)
PBDE 119 (2,3',4,4',6-Pentabromodiphenyl ether)
PBDE 12 (3,4-Dibromodiphenyl ether)
PBDE 120 (2,3',4,5,5'-Pentabromodiphenyl ether)
PBDE 126 (3,3',4,4',5-Pentabromodiphenyl ether)
PBDE 128 (2,2',3,3',4,4'-Hexabromodiphenyl ether)

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PBDE 13 (3,4'-Dibromodiphenyl ether)
PBDE 138 (2,2',3,4,4',5'-Hexabromodiphenyl ether)
PBDE 140 (2,2',3,4,4',6'-Hexabromodiphenyl ether)
PBDE 15 (4,4'-Dibromodiphenyl ether)
PBDE 153 (2,2',4,4',5,5'-Hexabromodiphenyl ether)
PBDE 154 (2,2',4,4',5,6'-Hexabromodiphenyl ether)
PBDE 155 (2,2',4,4',6,6'-Hexabromodiphenyl ether)
PBDE 166 (2,3,4,4',5,6-Hexabromodiphenyl ether)
PBDE 17 (2,2',4-Tribromodiphenyl ether)
PBDE 181 (2,2',3,4,4',5,6-Heptabromodiphenyl ether)
PBDE 183 (2,2',3,4,4',5',6-Heptabromodiphenyl ether)
PBDE 190 (2,3,3',4,4',5,6-Heptabromodiphenyl ether)
PBDE 203 (2,2',3,4,4',5,5',6-Octabromodiphenyl ether)
PBDE 206 (2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether)
PBDE 207 (2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether)
PBDE 208 (2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether)
PBDE 209 (2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether)
PBDE 25 (2,3',4-Tribromodiphenyl ether)
PBDE 28 (2,4,4'-Tribromodiphenyl ether)
PBDE 30 (2,4,6-Tribromodiphenyl ether)
PBDE 32 (2,4',6-Tribromodiphenyl ether)
PBDE 33 (2',3,4-Tribromodiphenyl ether)
PBDE 35 (3,3',4-Tribromodiphenyl ether)
PBDE 37 (3,4,4'-Tribromodiphenyl ether)
PBDE 47 (2,2',4,4'-Tetrabromodiphenyl ether)
PBDE 49 (2,2',4,5'-Tetrabromodiphenyl ether)
PBDE 51 (2,2',4,6'-Tetrabromodiphenyl ether)
PBDE 66 (2,3',4,4'-Tetrabromodiphenyl ether)
PBDE 7 (2,4-Dibromodiphenyl ether)
PBDE 71 (2,3',4',6-Tetrabromodiphenyl ether)
PBDE 75 (2,4,4',6-Tetrabromodiphenyl ether)
PBDE 77 (3,3',4,4'-Tetrabromodiphenyl ether)
PBDE 79 (3,3',4,5'-Tetrabromodiphenyl ether)
PBDE 8 (2,4'-Dibromodiphenyl ether)
PBDE 85 (2,2',3,4,4'-Pentabromodiphenyl ether)
PBDE 99 (2,2',4,4',5-Pentabromodiphenyl ether)
Pentabromoethylbenzene (PBEB)

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Air (Organic)
Dioxins and Furans (PCDD/PCDF) - Air (001)
BU-TM-1107, BU-TM-1110; modified from EPA 0023A and EPA 1613B and EPA 23 and EPA 8290A and EPA TO -9A

GC/HRMS

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)
1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-HxCDD)
1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-HxCDF)
1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,6,7,8-HxCDD)
1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-HxCDF)
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-PeCDD)
1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-PeCDF)
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-HxCDD)
1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-HxCDF)
2,3,4,6,7,8-HxCDF
2,3,4,7,8-PeCDF
2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)
2,3,7,8-Tetrachlorodibenzofuran (2,3,7,8-TCDF)
Octachlorodibenzo-p-dioxin (OCDD, 1,2,3,4,6,7,8,9-Octachloro dibenzo-p-dioxin)
Octachlorodibenzofuran (OCDF, 1,2,3,4,6,7,8,9-Octachlorodibenzofuran)
Total Heptachlorodibenzo-p-dioxins (Total HpCDD)
Total Heptachlorodibenzofurans (Total HpCDF)
Total Hexachlorodibenzo-p-dioxins (Total HxCDD)
Total Hexachlorodibenzofurans (Total HxCDF)
Total Pentachlorodibenzo-p-dioxins (Total PeCDD)
Total Pentachlorodibenzofurans (Total PeCDF)
Total Tetrachlorodibenzo-p-dioxins (Total TCDD)
Total Tetrachlorodibenzofurans (Total TCDF)

Air (Organic)
Polychlorinated Biphenyls (PCB) - Air (036)
BU-TM-1105; modified from EPA 1668A and EPA 1668C

GC/HRMS

PCB 1 (2-Chlorobiphenyl)
PCB 10 (2,6-Dichlorobiphenyl)
PCB 100 (2,2',4,4',6-Pentachlorobiphenyl)
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl)
PCB 102 (2,2',4,5,6'-Pentachlorobiphenyl)
PCB 103 (2,2',4,5',6-Pentachlorobiphenyl)
PCB 104 (2,2',4,6,6'-Pentachlorobiphenyl)
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl)

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PCB 107 (2,3,3',4',5-Pentachlorobiphenyl)
PCB 108 (2,3,3',4,5'-Pentachlorobiphenyl)
PCB 109 (2,3,3',4,6-Pentachlorobiphenyl)
PCB 11 (3,3'-Dichlorobiphenyl)
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl)
PCB 111 (2,3,3',5,5'-Pentachlorobiphenyl)
PCB 112 (2,3,3',5,6-Pentachlorobiphenyl)
PCB 113 (2,3,3',5',6-Pentachlorobiphenyl)
PCB 114 (2,3,4,4',5-Pentachlorobiphenyl)
PCB 115 (2,3,4,4',6-Pentachlorobiphenyl)
PCB 116 (2,3,4,5,6-Pentachlorobiphenyl)
PCB 117 (2,3,4',5,6-Pentachlorobiphenyl)
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl)
PCB 119 (2,3',4,4',6-Pentachlorobiphenyl)
PCB 12 (3,4-Dichlorobiphenyl)
PCB 120 (2,3',4,5,5'-Pentachlorobiphenyl)
PCB 121 (2,3',4,5',6-Pentachlorobiphenyl)
PCB 122 (2,3,3',4',5'-Pentachlorobiphenyl)
PCB 123 (2,3',4,4',5'-Pentachlorobiphenyl)
PCB 124 (2,3',4',5,5'-Pentachlorobiphenyl)
PCB 125 (2,3',4',5',6-Pentachlorobiphenyl)
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl)
PCB 127 (3,3',4,5,5'-Pentachlorobiphenyl)
PCB 128 (2,2',3,3',4,4'-Pentachlorobiphenyl)
PCB 129 (2,2',3,3',4,5-Hexachlorobiphenyl)
PCB 13 (3,4'-Dichlorobiphenyl)
PCB 130 (2,2',3,3',4,5'-Hexachlorobiphenyl)
PCB 131 (2,2',3,3',4,6-Hexachlorobiphenyl)
PCB 132 (2,2',3,3',4,6'-Hexachlorobiphenyl)
PCB 133 (2,2',3,3',5,5'-Hexachlorobiphenyl)
PCB 134 (2,2',3,3',5,6-Hexachlorobiphenyl)
PCB 135 (2,2',3,3',5,6'-Hexachlorobiphenyl)
PCB 136 (2,2',3,3',6,6'-Hexachlorobiphenyl)
PCB 137 (2,2',3,4,4',5-Hexachlorobiphenyl)
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl)
PCB 139 (2,2',3,4,4',6-Hexachlorobiphenyl)
PCB 14 (3,5-Dichlorobiphenyl)
PCB 140 (2,2',3,4,4',6'-Hexachlorobiphenyl)
PCB 141 (2,2',3,4,5,5'-Hexachlorobiphenyl)
PCB 142 (2,2',3,4,5,6-Hexachlorobiphenyl)

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PCB 143 (2,2',3,4,5,6'-Hexachlorobiphenyl)
PCB 144 (2,2',3,4,5',6-Hexachlorobiphenyl)
PCB 145 (2,2',3,4,6,6'-Hexachlorobiphenyl)
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl)
PCB 147 (2,2',3,4',5,6-Hexachlorobiphenyl)
PCB 148 (2,2',3,4',5,6'-Hexachlorobiphenyl)
PCB 149 (2,2',3,4',5',6-Hexachlorobiphenyl)
PCB 15 (4,4'-Dichlorobiphenyl)
PCB 150 (2,2',3,4',6,6'-Hexachlorobiphenyl)
PCB 151 (2,2',3,5,5',6-Hexachlorobiphenyl)
PCB 152 (2,2',3,5,6,6'-Hexachlorobiphenyl)
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl)
PCB 154 (2,2',4,4',5,6'-Hexachlorobiphenyl)
PCB 155 (2,2',4,4',6,6'-Hexachlorobiphenyl)
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl)
PCB 157 (2,3,3',4,4',5'-Hexachlorobiphenyl)
PCB 158 (2,3,3',4,4',6-Hexachlorobiphenyl)
PCB 159 (2,3,3',4,5,5'-Hexachlorobiphenyl)
PCB 16 (2,2',3-Trichlorobiphenyl)
PCB 160 (2,3,3',4,5,6-Hexachlorobiphenyl)
PCB 161 (2,3,3',4,5',6-Hexachlorobiphenyl)
PCB 162 (2,3,3',4',5,5'-Hexachlorobiphenyl)
PCB 163 (2,3,3',4',5,6-Hexachlorobiphenyl)
PCB 164 (2,3,3',4',5',6-Hexachlorobiphenyl)
PCB 165 (2,3,3',5,5',6-Hexachlorobiphenyl)
PCB 166 (2,3,4,4',5,6-Hexachlorobiphenyl)
PCB 167 (2,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 168 (2,3',4,4',5',6-Hexachlorobiphenyl)
PCB 169 (3,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 17 (2,2',4-Trichlorobiphenyl)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)
PCB 171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)
PCB 172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)
PCB 173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)
PCB 174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)
PCB 175 (2,2',3,3',4,5',6-Heptachlorobiphenyl)
PCB 176 (2,2',3,3',4,6,6'-Heptachlorobiphenyl)
PCB 177 (2,2',3,3',4,6',6'-Heptachlorobiphenyl)
PCB 178 (2,2',3,3',5,5',6-Heptachlorobiphenyl)
PCB 179 (2,2',3,3',5,6,6'-Heptachlorobiphenyl)
PCB 18 (2,2',5-Trichlorobiphenyl)

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PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)
PCB 181 (2,2',3,4,4',5,6-Heptachlorobiphenyl)
PCB 182 (2,2',3,4,4',5,6'-Heptachlorobiphenyl)
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)
PCB 184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)
PCB 185 (2,2',3,4,5,5',6-Heptachlorobiphenyl)
PCB 186 (2,2',3,4,5,6,6'-Heptachlorobiphenyl)
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)
PCB 188 (2,2',3,4',5,6,6'-Heptachlorobiphenyl)
PCB 189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)
PCB 19 (2,2',6-Trichlorobiphenyl)
PCB 190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)
PCB 191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)
PCB 192 (2,3,3',4,5,5',6-Heptachlorobiphenyl)
PCB 193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)
PCB 196 (2,2',3,3',4,4',5,6'-Octachlorobiphenyl)
PCB 197 (2,2',3,3',4,4',6,6'-Octachlorobiphenyl)
PCB 198 (2,2',3,3',4,5,5',6-Octachlorobiphenyl)
PCB 199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)
PCB 2 (3-Chlorobiphenyl)
PCB 20 (2,3,3'-Trichlorobiphenyl)
PCB 200 (2,2',3,3',4,5,6,6'-Octachlorobiphenyl)
PCB 201 (2,2',3,3',4,5',6,6'-Octachlorobiphenyl)
PCB 202 (2,2',3,3',5,5',6,6'-Octachlorobiphenyl)
PCB 203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)
PCB 204 (2,2',3,4,4',5,6,6'-Octachlorobiphenyl)
PCB 205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)
PCB 207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)
PCB 208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)
PCB 209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)
PCB 21 (2,3,4-Trichlorobiphenyl)
PCB 22 (2,3,4'-Trichlorobiphenyl)
PCB 23 (2,3,5-Trichlorobiphenyl)
PCB 24 (2,3,6-Trichlorobiphenyl)
PCB 25 (2,3',4-Trichlorobiphenyl)
PCB 26 (2,3',5-Trichlorobiphenyl)
PCB 27 (2,3',6-Trichlorobiphenyl)
PCB 28 (2,4,4'-Trichlorobiphenyl)

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PCB 29 (2,4,5-Trichlorobiphenyl)
PCB 3 (4-Chlorobiphenyl)
PCB 30 (2,4,6-Trichlorobiphenyl)
PCB 31 (2,4',5-Trichlorobiphenyl)
PCB 32 (2,4',6-Trichlorobiphenyl)
PCB 33 (2,3',4'-Trichlorobiphenyl)
PCB 34 (2,3',5'-Trichlorobiphenyl)
PCB 35 (3,3',4-Trichlorobiphenyl)
PCB 36 (3,3',5-Trichlorobiphenyl)
PCB 37 (3,4,4'-Trichlorobiphenyl)
PCB 38 (3,4,5-Trichlorobiphenyl)
PCB 39 (3,4',5-Trichlorobiphenyl)
PCB 4 (2,2'-Dichlorobiphenyl)
PCB 40 (2,2',3,3'-Tetrachlorobiphenyl)
PCB 41 (2,2',3,4-Tetrachlorobiphenyl)
PCB 42 (2,2',3,4'-Tetrachlorobiphenyl)
PCB 43 (2,2',3,5-Tetrachlorobiphenyl)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl)
PCB 45 (2,2',3,6-Tetrachlorobiphenyl)
PCB 46 (2,2',3,6'-Tetrachlorobiphenyl)
PCB 47 (2,2',4,4'-Tetrachlorobiphenyl)
PCB 48 (2,2',4,5-Tetrachlorobiphenyl)
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl)
PCB 5 (2,3-Dichlorobiphenyl)
PCB 50 (2,2',4,6-Tetrachlorobiphenyl)
PCB 51 (2,2',4,6'-Tetrachlorobiphenyl)
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl)
PCB 53 (2,2',5,6'-Tetrachlorobiphenyl)
PCB 54 (2,2',6,6'-Tetrachlorobiphenyl)
PCB 55 (2,3,3',4-Tetrachlorobiphenyl)
PCB 56 (2,3,3',4'-Tetrachlorobiphenyl)
PCB 57 (2,3,3',5-Tetrachlorobiphenyl)
PCB 58 (2,3,3',5'-Tetrachlorobiphenyl)
PCB 59 (2,3,3',6-Tetrachlorobiphenyl)
PCB 6 (2,3'-Dichlorobiphenyl)
PCB 60 (2,3,4,4'-Tetrachlorobiphenyl)
PCB 61 (2,3,4,5-Tetrachlorobiphenyl)
PCB 62 (2,3,4,6-Tetrachlorobiphenyl)
PCB 63 (2,3,4',5-Tetrachlorobiphenyl)
PCB 64 (2,3,4',6-Tetrachlorobiphenyl)
PCB 65 (2,3,5,6-Tetrachlorobiphenyl)

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PCB 66 (2,3',4,4'-Tetrachlorobiphenyl)
PCB 67 (2,3',4,5-Tetrachlorobiphenyl)
PCB 68 (2,3',4,5'-Tetrachlorobiphenyl)
PCB 69 (2,3',4,6-Tetrachlorobiphenyl)
PCB 7 (2,4-Dichlorobiphenyl)
PCB 70 (2,3',4',5-Tetrachlorobiphenyl)
PCB 71 (2,3',4',6-Tetrachlorobiphenyl)
PCB 72 (2,3',5,5'-Tetrachlorobiphenyl)
PCB 73 (2,3',5',6-Tetrachlorobiphenyl)
PCB 74 (2,4,4',5-Tetrachlorobiphenyl)
PCB 75 (2,4,4',6-Tetrachlorobiphenyl)
PCB 76 (2,3',4',5'-Tetrachlorobiphenyl)
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl)
PCB 78 (3,3',4,5-Tetrachlorobiphenyl)
PCB 79 (3,3',4,5'-Tetrachlorobiphenyl)
PCB 8 (2,4'-Dichlorobiphenyl)
PCB 80 (3,3',5,5'-Tetrachlorobiphenyl)
PCB 81 (3,4,4',5-Tetrachlorobiphenyl)
PCB 82 (2,2',3,3',4-Pentachlorobiphenyl)
PCB 83 (2,2',3,3',5-Pentachlorobiphenyl)
PCB 84 (2,2',3,3',6-Pentachlorobiphenyl)
PCB 85 (2,2',3,4,4'-Pentachlorobiphenyl)
PCB 86 (2,2',3,4,5-Pentachlorobiphenyl)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl)
PCB 88 (2,2',3,4,6-Pentachlorobiphenyl)
PCB 89 (2,2',3,4,6'-Pentachlorobiphenyl)
PCB 9 (2,5-Dichlorobiphenyl)
PCB 90 (2,2',3,4',5-Pentachlorobiphenyl)
PCB 91 (2,2',3,4',6-Pentachlorobiphenyl)
PCB 92 (2,2',3,5,5'-Pentachlorobiphenyl)
PCB 93 (2,2',3,5,6-Pentachlorobiphenyl)
PCB 94 (2,2',3,5,6'-Pentachlorobiphenyl)
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl)
PCB 96 (2,2',3,6,6'-Pentachlorobiphenyl)
PCB 97 (2,2',3,4',5'-Pentachlorobiphenyl)
PCB 98 (2,2',3,4',6'-Pentachlorobiphenyl)
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl)

Air (Organic)

Polycyclic Aromatic Hydrocarbons (PAH) - Air (013)

BU-TM-1100, BU-TP-2100; modified from CARB 429 and EPA 3540C and EPA 8270E

GC/MS - EXTRACTION

Acenaphthene

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Acenaphthylene
Anthracene
Benzo (a) anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Chrysene
Dibenzo(a,h)anthracene
Fluoranthene
Fluorene
Indeno(1,2,3-cd)pyrene
Naphthalene
Phenanthrene
Pyrene

Air (Organic)
Volatile Organic Compounds (VOC) - Air (007)
BU-TM-1114; modified from EPA 5041A and EPA 8260B and EPA 8260C
GC/MS-PURGE AND TRAP
1,1-Dichloroethane
1,1-Dichloroethene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
1,2-Dichloroethane
1,2-Dichloropropane
1,2,3-Trichloropropane
2-Butanone (Methyl ethyl ketone, MEK)
4-Methyl-2-pentanone (MIBK)
Acetone (2-Propanone)
Benzene
Bromodichloromethane
Bromoform
Bromomethane
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chlorodibromomethane
Chloroethane (Ethyl Chloride)
Chloroethene (Vinyl chloride)
Chloroform
Chloromethane (Methyl chloride)

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cis-1,2-Dichloroethylene
cis-1,3-Dichloropropene
Dibromomethane
Dichloromethane (Methylene Chloride)
Ethylbenzene
Hexanone
Iodomethane
m,p-Xylene
o-Xylene
Styrene
Tetrachloroethylene
Toluene
trans-1,2-Dichloroethylene
trans-1,3-Dichloropropene
Trichloroethene
Trichlorofluoromethane

Biological Oil (Inorganic)
Mercury - Biological Oil (047)
BU-TM-1001, BU-TP-2010; EPA 3052 and EPA 7470
COLD VAPOUR ATOMIC ABSORPTION (CVAA) - DIGESTION
Mercury

Biological Oil (Inorganic)
Metals - Biological Oil (046)
BU-TM-1010, BU-TP-2010; EPA 3052 and EPA 6020B
ICP/MS
Arsenic
Cadmium
Lead

Food (Organic)
Brominated Diphenyl Ethers (BDE) and Related Fire Retardants - Food [Butter, Dairy, Fat, Grains, Milled Grain Product, Nut Butter, Vegetable Oil] (034)
BU-TM-1109; modified from EPA 1614A
GC/HRMS
1,2-Bis(2,4,6-tribromophenoxy)ethane (BTBPE)
Decabromodiphenyl ethane
Hexabromobenzene (HBB)
PBDE 10 (2,6-Dibromodiphenyl ether)
PBDE 100 (2,2',4,4',6-Pentabromodiphenyl ether)
PBDE 105 (2,3,3',4,4'-Pentabromodiphenyl ether)
PBDE 11 (3,3'-Dibromodiphenyl ether)
PBDE 116 (2,3,4,5,6-Pentabromodiphenyl ether)
PBDE 118 (2,3',4,4',5-Pentabromodiphenyl ether)
PBDE 119 (2,3',4,4',6-Pentabromodiphenyl ether)

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PBDE 12 (3,4-Dibromodiphenyl ether)
PBDE 120 (2,3',4,5,5'-Pentabromodiphenyl ether)
PBDE 126 (3,3',4,4',5-Pentabromodiphenyl ether)
PBDE 128 (2,2',3,3',4,4'-Hexabromodiphenyl ether)
PBDE 13 (3,4'-Dibromodiphenyl ether)
PBDE 138 (2,2',3,4,4',5'-Hexabromodiphenyl ether)
PBDE 140 (2,2',3,4,4',6'-Hexabromodiphenyl ether)
PBDE 15 (4,4'-Dibromodiphenyl ether)
PBDE 153 (2,2',4,4',5,5'-Hexabromodiphenyl ether)
PBDE 154 (2,2',4,4',5,6'-Hexabromodiphenyl ether)
PBDE 155 (2,2',4,4',6,6'-Hexabromodiphenyl ether)
PBDE 166 (2,3,4,4',5,6-Hexabromodiphenyl ether)
PBDE 17 (2,2',4-Tribromodiphenyl ether)
PBDE 181 (2,2',3,4,4',5,6-Heptabromodiphenyl ether)
PBDE 183 (2,2',3,4,4',5',6-Heptabromodiphenyl ether)
PBDE 190 (2,3,3',4,4',5,6-Heptabromodiphenyl ether)
PBDE 203 (2,2',3,4,4',5,5',6-Octabromodiphenyl ether)
PBDE 206 (2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether)
PBDE 207 (2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether)
PBDE 208 (2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether)
PBDE 209 (2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether)
PBDE 25 (2,3',4-Tribromodiphenyl ether)
PBDE 28 (2,4,4'-Tribromodiphenyl ether)
PBDE 30 (2,4,6-Tribromodiphenyl ether)
PBDE 32 (2,4',6-Tribromodiphenyl ether)
PBDE 33 (2',3,4-Tribromodiphenyl ether)
PBDE 35 (3,3',4-Tribromodiphenyl ether)
PBDE 37 (3,4,4'-Tribromodiphenyl ether)
PBDE 47 (2,2',4,4'-Tetrabromodiphenyl ether)
PBDE 49 (2,2',4,5'-Tetrabromodiphenyl ether)
PBDE 51 (2,2',4,6'-Tetrabromodiphenyl ether)
PBDE 66 (2,3',4,4'-Tetrabromodiphenyl ether)
PBDE 7 (2,4-Dibromodiphenyl ether)
PBDE 71 (2,3',4',6-Tetrabromodiphenyl ether)
PBDE 75 (2,4,4',6-Tetrabromodiphenyl ether)
PBDE 77 (3,3',4,4'-Tetrabromodiphenyl ether)
PBDE 79 (3,3',4,5'-Tetrabromodiphenyl ether)
PBDE 8 (2,4'-Dibromodiphenyl ether)
PBDE 85 (2,2',3,4,4'-Pentabromodiphenyl ether)
PBDE 99 (2,2',4,4',5-Pentabromodiphenyl ether)
Pentabromoethylbenzene (PBEB)

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Food (Organic)
Polyaromatic Hydrocarbons (PAH) - Food [Beverage, Cereal, Dairy, Edible Meat Offal, Edible Oil, Egg, Fish, Fresh Fruit, Meat] (023)
BU-TM-1100, BU-TP-2100; modified from CARB 429 and EPA 3510C

GC/HRMS - EXTRACTION

1-Methylnaphthalene
2-Methylnaphthalene
Acenaphthene
Acenaphthylene
Anthracene
Benzo (a) anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Chrysene
Dibenzo(a,h)anthracene
Fluoranthene
Fluorene
Indeno(1,2,3-cd)pyrene
Naphthalene
Perylene
Phenanthrene
Pyrene

Food (Organic)
Polychlorinated Biphenyls (PCB) Congeners - Food [Cereal, Dairy, Edible Meat Offal, Edible Oil, Egg, Fish, Fresh Fruit, Meat, Vegetables] (025)
BU-TM-1105, BU-TM-1110; modified from EPA 1668

GC/HRMS

PCB 1 (2-Chlorobiphenyl)
PCB 10 (2,6-Dichlorobiphenyl)
PCB 100 (2,2',4,4',6-Pentachlorobiphenyl)
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl)
PCB 102 (2,2',4,5,6'-Pentachlorobiphenyl)
PCB 103 (2,2',4,5',6-Pentachlorobiphenyl)
PCB 104 (2,2',4,6,6'-Pentachlorobiphenyl)
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl)
PCB 106 (2,3,3',4,5-Pentachlorobiphenyl)
PCB 107 (2,3,3',4',5-Pentachlorobiphenyl)
PCB 108 (2,3,3',4,5'-Pentachlorobiphenyl)
PCB 109 (2,3,3',4,6-Pentachlorobiphenyl)
PCB 11 (3,3'-Dichlorobiphenyl)
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl)

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PCB 111 (2,3,3',5,5'-Pentachlorobiphenyl)
PCB 112 (2,3,3',5,6-Pentachlorobiphenyl)
PCB 113 (2,3,3',5',6-Pentachlorobiphenyl)
PCB 114 (2,3,4,4',5-Pentachlorobiphenyl)
PCB 115 (2,3,4,4',6-Pentachlorobiphenyl)
PCB 116 (2,3,4,5,6-Pentachlorobiphenyl)
PCB 117 (2,3,4',5,6-Pentachlorobiphenyl)
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl)
PCB 119 (2,3',4,4',6-Pentachlorobiphenyl)
PCB 12 (3,4-Dichlorobiphenyl)
PCB 120 (2,3',4,5,5'-Pentachlorobiphenyl)
PCB 121 (2,3',4,5',6-Pentachlorobiphenyl)
PCB 122 (2,3,3',4',5'-Pentachlorobiphenyl)
PCB 123 (2,3',4,4',5'-Pentachlorobiphenyl)
PCB 124 (2,3',4',5,5'-Pentachlorobiphenyl)
PCB 125 (2,3',4',5',6-Pentachlorobiphenyl)
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl)
PCB 127 (3,3',4,5,5'-Pentachlorobiphenyl)
PCB 128 (2,2',3,3',4,4'-Pentachlorobiphenyl)
PCB 129 (2,2',3,3',4,5-Hexachlorobiphenyl)
PCB 13 (3,4'-Dichlorobiphenyl)
PCB 130 (2,2',3,3',4,5'-Hexachlorobiphenyl)
PCB 131 (2,2',3,3',4,6-Hexachlorobiphenyl)
PCB 132 (2,2',3,3',4,6'-Hexachlorobiphenyl)
PCB 133 (2,2',3,3',5,5'-Hexachlorobiphenyl)
PCB 134 (2,2',3,3',5,6-Hexachlorobiphenyl)
PCB 135 (2,2',3,3',5,6'-Hexachlorobiphenyl)
PCB 136 (2,2',3,3',6,6'-Hexachlorobiphenyl)
PCB 137 (2,2',3,4,4',5-Hexachlorobiphenyl)
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl)
PCB 139 (2,2',3,4,4',6-Hexachlorobiphenyl)
PCB 14 (3,5-Dichlorobiphenyl)
PCB 140 (2,2',3,4,4',6'-Hexachlorobiphenyl)
PCB 141 (2,2',3,4,5,5'-Hexachlorobiphenyl)
PCB 142 (2,2',3,4,5,6-Hexachlorobiphenyl)
PCB 143 (2,2',3,4,5,6'-Hexachlorobiphenyl)
PCB 144 (2,2',3,4,5',6-Hexachlorobiphenyl)
PCB 145 (2,2',3,4,6,6'-Hexachlorobiphenyl)
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl)
PCB 147 (2,2',3,4',5,6-Hexachlorobiphenyl)
PCB 148 (2,2',3,4',5,6'-Hexachlorobiphenyl)

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PCB 149 (2,2',3,4',5',6-Hexachlorobiphenyl)
PCB 15 (4,4'-Dichlorobiphenyl)
PCB 150 (2,2',3,4',6,6'-Hexachlorobiphenyl)
PCB 151 (2,2',3,5,5',6-Hexachlorobiphenyl)
PCB 152 (2,2',3,5,6,6'-Hexachlorobiphenyl)
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl)
PCB 154 (2,2',4,4',5,6'-Hexachlorobiphenyl)
PCB 155 (2,2',4,4',6,6'-Hexachlorobiphenyl)
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl)
PCB 157 (2,3,3',4,4',5'-Hexachlorobiphenyl)
PCB 158 (2,3,3',4,4',6-Hexachlorobiphenyl)
PCB 159 (2,3,3',4,5,5'-Hexachlorobiphenyl)
PCB 16 (2,2',3-Trichlorobiphenyl)
PCB 160 (2,3,3',4,5,6-Hexachlorobiphenyl)
PCB 161 (2,3,3',4,5',6-Hexachlorobiphenyl)
PCB 162 (2,3,3',4',5,5'-Hexachlorobiphenyl)
PCB 163 (2,3,3',4',5,6-Hexachlorobiphenyl)
PCB 164 (2,3,3',4',5',6-Hexachlorobiphenyl)
PCB 165 (2,3,3',5,5',6-Hexachlorobiphenyl)
PCB 166 (2,3,4,4',5,6-Hexachlorobiphenyl)
PCB 167 (2,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 168 (2,3',4,4',5',6-Hexachlorobiphenyl)
PCB 169 (3,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 17 (2,2',4-Trichlorobiphenyl)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)
PCB 171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)
PCB 172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)
PCB 173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)
PCB 174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)
PCB 175 (2,2',3,3',4,5',6-Heptachlorobiphenyl)
PCB 176 (2,2',3,3',4,6,6'-Heptachlorobiphenyl)
PCB 177 (2,2',3,3',4,6',6'-Heptachlorobiphenyl)
PCB 178 (2,2',3,3',5,5',6-Heptachlorobiphenyl)
PCB 179 (2,2',3,3',5,6,6'-Heptachlorobiphenyl)
PCB 18 (2,2',5-Trichlorobiphenyl)
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)
PCB 181 (2,2',3,4,4',5,6-Heptachlorobiphenyl)
PCB 182 (2,2',3,4,4',5,6'-Heptachlorobiphenyl)
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)
PCB 184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)
PCB 185 (2,2',3,4,5,5',6-Heptachlorobiphenyl)

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PCB 186 (2,2',3,4,5,6,6'-Heptachlorobiphenyl)
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)
PCB 188 (2,2',3,4',5,6,6'-Heptachlorobiphenyl)
PCB 189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)
PCB 19 (2,2',6-Trichlorobiphenyl)
PCB 190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)
PCB 191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)
PCB 192 (2,3,3',4,5,5',6-Heptachlorobiphenyl)
PCB 193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)
PCB 196 (2,2',3,3',4,4',5,6'-Octachlorobiphenyl)
PCB 197 (2,2',3,3',4,4',6,6'-Octachlorobiphenyl)
PCB 198 (2,2',3,3',4,5,5',6-Octachlorobiphenyl)
PCB 199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)
PCB 2 (3-Chlorobiphenyl)
PCB 20 (2,3,3'-Trichlorobiphenyl)
PCB 200 (2,2',3,3',4,5,6,6'-Octachlorobiphenyl)
PCB 201 (2,2',3,3',4,5',6,6'-Octachlorobiphenyl)
PCB 202 (2,2',3,3',5,5',6,6'-Octachlorobiphenyl)
PCB 203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)
PCB 204 (2,2',3,4,4',5,6,6'-Octachlorobiphenyl)
PCB 205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)
PCB 207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)
PCB 208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)
PCB 209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)
PCB 21 (2,3,4-Trichlorobiphenyl)
PCB 22 (2,3,4'-Trichlorobiphenyl)
PCB 23 (2,3,5-Trichlorobiphenyl)
PCB 24 (2,3,6-Trichlorobiphenyl)
PCB 25 (2,3',4-Trichlorobiphenyl)
PCB 26 (2,3',5-Trichlorobiphenyl)
PCB 27 (2,3',6-Trichlorobiphenyl)
PCB 28 (2,4,4'-Trichlorobiphenyl)
PCB 29 (2,4,5-Trichlorobiphenyl)
PCB 3 (4-Chlorobiphenyl)
PCB 30 (2,4,6-Trichlorobiphenyl)
PCB 31 (2,4',5-Trichlorobiphenyl)
PCB 32 (2,4',6-Trichlorobiphenyl)
PCB 33 (2,3',4'-Trichlorobiphenyl)

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PCB 34 (2,3',5'-Trichlorobiphenyl)
PCB 35 (3,3',4-Trichlorobiphenyl)
PCB 36 (3,3',5-Trichlorobiphenyl)
PCB 37 (3,4,4'-Trichlorobiphenyl)
PCB 38 (3,4,5-Trichlorobiphenyl)
PCB 39 (3,4',5-Trichlorobiphenyl)
PCB 4 (2,2'-Dichlorobiphenyl)
PCB 40 (2,2',3,3'-Tetrachlorobiphenyl)
PCB 41 (2,2',3,4-Tetrachlorobiphenyl)
PCB 42 (2,2',3,4'-Tetrachlorobiphenyl)
PCB 43 (2,2',3,5-Tetrachlorobiphenyl)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl)
PCB 45 (2,2',3,6-Tetrachlorobiphenyl)
PCB 46 (2,2',3,6'-Tetrachlorobiphenyl)
PCB 47 (2,2',4,4'-Tetrachlorobiphenyl)
PCB 48 (2,2',4,5-Tetrachlorobiphenyl)
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl)
PCB 5 (2,3-Dichlorobiphenyl)
PCB 50 (2,2',4,6-Tetrachlorobiphenyl)
PCB 51 (2,2',4,6'-Tetrachlorobiphenyl)
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl)
PCB 53 (2,2',5,6'-Tetrachlorobiphenyl)
PCB 54 (2,2',6,6'-Tetrachlorobiphenyl)
PCB 55 (2,3,3',4-Tetrachlorobiphenyl)
PCB 56 (2,3,3',4'-Tetrachlorobiphenyl)
PCB 57 (2,3,3',5-Tetrachlorobiphenyl)
PCB 58 (2,3,3',5'-Tetrachlorobiphenyl)
PCB 59 (2,3,3',6-Tetrachlorobiphenyl)
PCB 6 (2,3'-Dichlorobiphenyl)
PCB 60 (2,3,4,4'-Tetrachlorobiphenyl)
PCB 61 (2,3,4,5-Tetrachlorobiphenyl)
PCB 62 (2,3,4,6-Tetrachlorobiphenyl)
PCB 63 (2,3,4',5-Tetrachlorobiphenyl)
PCB 64 (2,3,4',6-Tetrachlorobiphenyl)
PCB 65 (2,3,5,6-Tetrachlorobiphenyl)
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl)
PCB 67 (2,3',4,5-Tetrachlorobiphenyl)
PCB 68 (2,3',4,5'-Tetrachlorobiphenyl)
PCB 69 (2,3',4,6-Tetrachlorobiphenyl)
PCB 7 (2,4-Dichlorobiphenyl)
PCB 70 (2,3',4',5-Tetrachlorobiphenyl)

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PCB 71 (2,3',4',6-Tetrachlorobiphenyl)
PCB 72 (2,3',5,5'-Tetrachlorobiphenyl)
PCB 73 (2,3',5',6-Tetrachlorobiphenyl)
PCB 74 (2,4,4',5-Tetrachlorobiphenyl)
PCB 75 (2,4,4',6-Tetrachlorobiphenyl)
PCB 76 (2,3',4',5'-Tetrachlorobiphenyl)
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl)
PCB 78 (3,3',4,5-Tetrachlorobiphenyl)
PCB 79 (3,3',4,5'-Tetrachlorobiphenyl)
PCB 8 (2,4'-Dichlorobiphenyl)
PCB 80 (3,3',5,5'-Tetrachlorobiphenyl)
PCB 81 (3,4,4',5-Tetrachlorobiphenyl)
PCB 82 (2,2',3,3',4-Pentachlorobiphenyl)
PCB 83 (2,2',3,3',5-Pentachlorobiphenyl)
PCB 84 (2,2',3,3',6-Pentachlorobiphenyl)
PCB 85 (2,2',3,4,4'-Pentachlorobiphenyl)
PCB 86 (2,2',3,4,5-Pentachlorobiphenyl)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl)
PCB 88 (2,2',3,4,6-Pentachlorobiphenyl)
PCB 89 (2,2',3,4,6'-Pentachlorobiphenyl)
PCB 9 (2,5-Dichlorobiphenyl)
PCB 90 (2,2',3,4',5-Pentachlorobiphenyl)
PCB 91 (2,2',3,4',6-Pentachlorobiphenyl)
PCB 92 (2,2',3,5,5'-Pentachlorobiphenyl)
PCB 93 (2,2',3,5,6-Pentachlorobiphenyl)
PCB 94 (2,2',3,5,6'-Pentachlorobiphenyl)
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl)
PCB 96 (2,2',3,6,6'-Pentachlorobiphenyl)
PCB 97 (2,2',3,4',5'-Pentachlorobiphenyl)
PCB 98 (2,2',3,4',6'-Pentachlorobiphenyl)
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl)

Food (Organic)
Polychlorinated Dioxins and Polychlorinated Furans and Selected PCB Congeners (PCDD/PCDF) - Food [Cereal, Dairy, Edible Meat Offal, Edible Oil, Egg, Fish, Fresh Fruit, Meat, Vegetables] (026)
BU-TM-1107, BU-TM-1110, BU-TM-1113, BU-TP-2113; modified from EPA 1613B and EPA 1668A and EPA 1668C

GC/HRMS
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)
1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-HxCDD)
1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-HxCDF)
1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)

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1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,6,7,8-HxCDD)
1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-HxCDF)
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-PeCDD)
1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-PeCDF)
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-HxCDD)
1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-HxCDF)
2,3,4,6,7,8-HxCDF
2,3,4,7,8-PeCDF
2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)
2,3,7,8-Tetrachlorodibenzofuran (2,3,7,8-TCDF)
Octachlorodibenzo-p-dioxin (OCDD, 1,2,3,4,6,7,8,9-Octachloro dibenzo-p-dioxin)
Octachlorodibenzofuran (OCDF, 1,2,3,4,6,7,8,9-Octachlorodibenzofuran)
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl)
PCB 114 (2,3,4,4',5-Pentachlorobiphenyl)
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl)
PCB 123 (2,3',4,4',5'-Pentachlorobiphenyl)
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl)
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl)
PCB 157 (2,3,3',4,4',5'-Hexachlorobiphenyl)
PCB 167 (2,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 169 (3,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)
PCB 189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl)
PCB 81 (3,4,4',5-Tetrachlorobiphenyl)
Total Heptachlorodibenzo-p-dioxins (Total HpCDD)
Total Heptachlorodibenzofurans (Total HpCDF)
Total Hexachlorodibenzo-p-dioxins (Total HxCDD)
Total Hexachlorodibenzofurans (Total HxCDF)
Total Pentachlorodibenzo-p-dioxins (Total PeCDD)
Total Pentachlorodibenzofurans (Total PeCDF)
Total Tetrachlorodibenzo-p-dioxins (Total TCDD)
Total Tetrachlorodibenzofurans (Total TCDF)

Food (Organic)

Polychlorinated Dioxins and Polychlorinated Furans and Selected PCB Congeners (PCDD/PCDF) - Food [Cereal, Dairy, Edible Meat Offal, Edible Oil, Egg, Fish, Fresh Fruit, Meat, Vegetables] (048)
BU-TM-1119, BU-TP-2119; modified from EPA 1613B and EPA 1668A and EPA 1668C

GC/MS/MS

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)
1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-HxCDD)

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1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-HxCDF)
1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,6,7,8-HxCDD)
1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-HxCDF)
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-PeCDD)
1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-PeCDF)
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-HxCDD)
1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-HxCDF)
2,3,4,6,7,8-HxCDF
2,3,4,7,8-PeCDF
2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)
2,3,7,8-Tetrachlorodibenzofuran (2,3,7,8-TCDF)
Octachlorodibenzo-p-dioxin (OCDD, 1,2,3,4,6,7,8,9-Octachloro dibenzo-p-dioxin)
Octachlorodibenzofuran (OCDF, 1,2,3,4,6,7,8,9-Octachlorodibenzofuran)
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl)
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl)
PCB 114 (2,3,4,4',5-Pentachlorobiphenyl)
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl)
PCB 123 (2,3',4,4',5'-Pentachlorobiphenyl)
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl)
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl)
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl)
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl)
PCB 157 (2,3,3',4,4',5'-Hexachlorobiphenyl)
PCB 167 (2,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 169 (3,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)
PCB 189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)
PCB 28 (2,4,4'-Trichlorobiphenyl)
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl)
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl)
PCB 81 (3,4,4',5-Tetrachlorobiphenyl)
Total Heptachlorodibenzo-p-dioxins (Total HpCDD)
Total Heptachlorodibenzofurans (Total HpCDF)
Total Hexachlorodibenzo-p-dioxins (Total HxCDD)
Total Hexachlorodibenzofurans (Total HxCDF)
Total Pentachlorodibenzo-p-dioxins (Total PeCDD)
Total Pentachlorodibenzofurans (Total PeCDF)
Total Tetrachlorodibenzo-p-dioxins (Total TCDD)
Total Tetrachlorodibenzofurans (Total TCDF)

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Solids (Inorganic)
Mercury - Solids [Sediment, Soil] (029)
BU-TM-1001; modified from EPA 7471A
COLD VAPOUR ATOMIC ABSORPTION (CVAA) - DIGESTION
Mercury

Solids (Inorganic)
Metals - Solids [Minerals, Sediment, Soil] (028)
BU-TM-1010, NA-TP-2004; modified from EPA 3052 (PREPARATION) and EPA 6020 (ANALYSIS)
ICP/MS - DIGESTION
Arsenic
Cadmium
Lead

Solids (Inorganic)
Moisture - Solids (035)
BU-TM-1200; modified from CCME CWS PETROLEUM HYDROCARBONS IN SOIL - TIER 1 METHOD
GRAVIMETRIC
Percent Moisture

Solids (Organic)
Brominated Diphenyl Ethers (BDE) and Related Fire Retardants - Solids [Sediment, Soil] (018)
BU-TM-1109, BU-TP-2109; modified from EPA 1614A
GC/HRMS
1,2-Bis(2,4,6-tribromophenoxy)ethane (BTBPE)
Decabromodiphenyl ethane
Hexabromobenzene (HBB)
PBDE 10 (2,6-Dibromodiphenyl ether)
PBDE 100 (2,2',4,4',6-Pentabromodiphenyl ether)
PBDE 105 (2,3,3',4,4'-Pentabromodiphenyl ether)
PBDE 11 (3,3'-Dibromodiphenyl ether)
PBDE 116 (2,3,4,5,6-Pentabromodiphenyl ether)
PBDE 118 (2,3',4,4',5-Pentabromodiphenyl ether)
PBDE 119 (2,3',4,4',6-Pentabromodiphenyl ether)
PBDE 12 (3,4-Dibromodiphenyl ether)
PBDE 120 (2,3',4,5,5'-Pentabromodiphenyl ether)
PBDE 126 (3,3',4,4',5-Pentabromodiphenyl ether)
PBDE 128 (2,2',3,3',4,4'-Hexabromodiphenyl ether)
PBDE 13 (3,4'-Dibromodiphenyl ether)
PBDE 138 (2,2',3,4,4',5'-Hexabromodiphenyl ether)
PBDE 140 (2,2',3,4,4',6'-Hexabromodiphenyl ether)
PBDE 15 (4,4'-Dibromodiphenyl ether)
PBDE 153 (2,2',4,4',5,5'-Hexabromodiphenyl ether)
PBDE 154 (2,2',4,4',5,6'-Hexabromodiphenyl ether)
PBDE 155 (2,2',4,4',6,6'-Hexabromodiphenyl ether)
PBDE 166 (2,3,4,4',5,6-Hexabromodiphenyl ether)

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PBDE 17 (2,2',4-Tribromodiphenyl ether)
PBDE 181 (2,2',3,4,4',5,6-Heptabromodiphenyl ether)
PBDE 183 (2,2',3,4,4',5',6-Heptabromodiphenyl ether)
PBDE 190 (2,3,3',4,4',5,6-Heptabromodiphenyl ether)
PBDE 203 (2,2',3,4,4',5,5',6-Octabromodiphenyl ether)
PBDE 206 (2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether)
PBDE 207 (2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether)
PBDE 208 (2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether)
PBDE 209 (2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether)
PBDE 25 (2,3',4-Tribromodiphenyl ether)
PBDE 28 (2,4,4'-Tribromodiphenyl ether)
PBDE 30 (2,4,6-Tribromodiphenyl ether)
PBDE 32 (2,4',6-Tribromodiphenyl ether)
PBDE 33 (2',3,4-Tribromodiphenyl ether)
PBDE 35 (3,3',4-Tribromodiphenyl ether)
PBDE 37 (3,4,4'-Tribromodiphenyl ether)
PBDE 47 (2,2',4,4'-Tetrabromodiphenyl ether)
PBDE 49 (2,2',4,5'-Tetrabromodiphenyl ether)
PBDE 51 (2,2',4,6'-Tetrabromodiphenyl ether)
PBDE 66 (2,3',4,4'-Tetrabromodiphenyl ether)
PBDE 7 (2,4-Dibromodiphenyl ether)
PBDE 71 (2,3',4',6-Tetrabromodiphenyl ether)
PBDE 75 (2,4,4',6-Tetrabromodiphenyl ether)
PBDE 77 (3,3',4,4'-Tetrabromodiphenyl ether)
PBDE 79 (3,3',4,5'-Tetrabromodiphenyl ether)
PBDE 8 (2,4'-Dibromodiphenyl ether)
PBDE 85 (2,2',3,4,4'-Pentabromodiphenyl ether)
PBDE 99 (2,2',4,4',5-Pentabromodiphenyl ether)
Pentabromoethylbenzene (PBEB)

Solids (Organic)
Dioxins and Furans (PCDD/PCDF) - Solids [Soil] (002)
BU-TM-1107, BU-TM-1110; modified from EPA 1613B and EPA 8290A
GC/HRMS
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)
1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-HxCDD)
1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-HxCDF)
1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,6,7,8-HxCDD)
1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-HxCDF)
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-PeCDD)
1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-PeCDF)

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1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-HxCDD)

1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-HxCDF)

2,3,4,6,7,8-HxCDF

2,3,4,7,8-PeCDF

2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)

2,3,7,8-Tetrachlorodibenzofuran (2,3,7,8-TCDF)

Octachlorodibenzo-p-dioxin (OCDD, 1,2,3,4,6,7,8,9-Octachloro dibenzo-p-dioxin)

Octachlorodibenzofuran (OCDF, 1,2,3,4,6,7,8,9-Octachlorodibenzofuran)

Total Heptachlorodibenzo-p-dioxins (Total HpCDD)

Total Heptachlorodibenzofurans (Total HpCDF)

Total Hexachlorodibenzo-p-dioxins (Total HxCDD)

Total Hexachlorodibenzofurans (Total HxCDF)

Total Pentachlorodibenzo-p-dioxins (Total PeCDD)

Total Pentachlorodibenzofurans (Total PeCDF)

Total Tetrachlorodibenzo-p-dioxins (Total TCDD)

Total Tetrachlorodibenzofurans (Total TCDF)

Solids (Organic)
Nitrosamines - Solids (011)
BU-TM-1106, BU-TP-2106; modified from ON MOECC E3388

GC/HRMS

N-Nitrosodimethylamine (NDMA)

Solids (Organic)
Organochlorine (OC) Pesticides - Solids (024)
BU-TM-1103, BU-TP-2103; modified from EPA 1699

GC/HRMS - EXTRACTION

1,2,3,4-Tetrachlorobenzene (1,2,3,4-TCB)

1,2,4,5-Tetrachlorobenzene (1,2,4,5-TCB)

2,4'-DDD (o,p'-DDD)

2,4'-DDE (o,p'-DDE)

2,4'-DDT (o,p'-DDT)

4,4'-DDD (p,p'-DDD)

4,4'-DDE (p,p'-DDE)

4,4'-DDT (p,p'-DDT)

Aldrin

alpha-BHC

alpha-Chlordane

beta-HCH (beta-Hexachlorocyclohexane (b-HCH, b-BHC, beta-BHC, beta-Hexachlorocyclohexane)

cis-Nonachlor

delta-HCH (d-HCH, d-BHC, delta-BHC, delta-Hexachlorocyclohexane)

Dieldrin

Endosulfan I (a-Endosulfan)

Endosulfan II (b-Endosulfan)

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Endosulfan Sulfate
Endrin
gamma-Chlordane
Heptachlor
Heptachlor epoxide
Hexachlorobenzene
Lindane (gamma-BHC)
Methoxychlor
Mirex
Octachlorostyrene
Oxychlordane
Pentachlorobenzene
Toxaphene 26 (Parlar 26)
Toxaphene 50 (Parlar 50)
Toxaphene 62 (Parlar 62)
trans-Nonachlor

Solids (Organic)
Polychlorinated Biphenyls (PCB) Congeners - Solids [Sediment, Soil] (015)
BU-TM-1105, BU-TM-1110; modified from EPA 1668A and EPA 1668C
GC/HRMS
PCB 1 (2-Chlorobiphenyl)
PCB 10 (2,6-Dichlorobiphenyl)
PCB 100 (2,2',4,4',6-Pentachlorobiphenyl)
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl)
PCB 102 (2,2',4,5,6'-Pentachlorobiphenyl)
PCB 103 (2,2',4,5',6-Pentachlorobiphenyl)
PCB 104 (2,2',4,6,6'-Pentachlorobiphenyl)
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl)
PCB 106 (2,3,3',4,5-Pentachlorobiphenyl)
PCB 107 (2,3,3',4',5-Pentachlorobiphenyl)
PCB 108 (2,3,3',4,5'-Pentachlorobiphenyl)
PCB 109 (2,3,3',4,6-Pentachlorobiphenyl)
PCB 11 (3,3'-Dichlorobiphenyl)
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl)
PCB 111 (2,3,3',5,5'-Pentachlorobiphenyl)
PCB 112 (2,3,3',5,6-Pentachlorobiphenyl)
PCB 113 (2,3,3',5',6-Pentachlorobiphenyl)
PCB 114 (2,3,4,4',5-Pentachlorobiphenyl)
PCB 115 (2,3,4,4',6-Pentachlorobiphenyl)
PCB 116 (2,3,4,5,6-Pentachlorobiphenyl)
PCB 117 (2,3,4',5,6-Pentachlorobiphenyl)
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl)

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PCB 119 (2,3',4,4',6-Pentachlorobiphenyl)
PCB 12 (3,4-Dichlorobiphenyl)
PCB 120 (2,3',4,5,5'-Pentachlorobiphenyl)
PCB 121 (2,3',4,5',6-Pentachlorobiphenyl)
PCB 122 (2,3,3',4',5'-Pentachlorobiphenyl)
PCB 123 (2,3',4,4',5'-Pentachlorobiphenyl)
PCB 124 (2,3',4',5,5'-Pentachlorobiphenyl)
PCB 125 (2,3',4',5',6-Pentachlorobiphenyl)
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl)
PCB 127 (3,3',4,5,5'-Pentachlorobiphenyl)
PCB 128 (2,2',3,3',4,4'-Pentachlorobiphenyl)
PCB 129 (2,2',3,3',4,5-Hexachlorobiphenyl)
PCB 13 (3,4'-Dichlorobiphenyl)
PCB 130 (2,2',3,3',4,5'-Hexachlorobiphenyl)
PCB 131 (2,2',3,3',4,6-Hexachlorobiphenyl)
PCB 132 (2,2',3,3',4,6'-Hexachlorobiphenyl)
PCB 133 (2,2',3,3',5,5'-Hexachlorobiphenyl)
PCB 134 (2,2',3,3',5,6-Hexachlorobiphenyl)
PCB 135 (2,2',3,3',5,6'-Hexachlorobiphenyl)
PCB 136 (2,2',3,3',6,6'-Hexachlorobiphenyl)
PCB 137 (2,2',3,4,4',5-Hexachlorobiphenyl)
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl)
PCB 139 (2,2',3,4,4',6-Hexachlorobiphenyl)
PCB 14 (3,5-Dichlorobiphenyl)
PCB 140 (2,2',3,4,4',6'-Hexachlorobiphenyl)
PCB 141 (2,2',3,4,5,5'-Hexachlorobiphenyl)
PCB 142 (2,2',3,4,5,6-Hexachlorobiphenyl)
PCB 143 (2,2',3,4,5,6'-Hexachlorobiphenyl)
PCB 144 (2,2',3,4,5',6-Hexachlorobiphenyl)
PCB 145 (2,2',3,4,6,6'-Hexachlorobiphenyl)
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl)
PCB 147 (2,2',3,4',5,6-Hexachlorobiphenyl)
PCB 148 (2,2',3,4',5,6'-Hexachlorobiphenyl)
PCB 149 (2,2',3,4',5',6-Hexachlorobiphenyl)
PCB 15 (4,4'-Dichlorobiphenyl)
PCB 150 (2,2',3,4',6,6'-Hexachlorobiphenyl)
PCB 151 (2,2',3,5,5',6-Hexachlorobiphenyl)
PCB 152 (2,2',3,5,6,6'-Hexachlorobiphenyl)
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl)
PCB 154 (2,2',4,4',5,6'-Hexachlorobiphenyl)
PCB 155 (2,2',4,4',6,6'-Hexachlorobiphenyl)

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PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl)
PCB 157 (2,3,3',4,4',5'-Hexachlorobiphenyl)
PCB 158 (2,3,3',4,4',6-Hexachlorobiphenyl)
PCB 159 (2,3,3',4,5,5'-Hexachlorobiphenyl)
PCB 16 (2,2',3-Trichlorobiphenyl)
PCB 160 (2,3,3',4,5,6-Hexachlorobiphenyl)
PCB 161 (2,3,3',4,5',6-Hexachlorobiphenyl)
PCB 162 (2,3,3',4',5,5'-Hexachlorobiphenyl)
PCB 163 (2,3,3',4',5,6-Hexachlorobiphenyl)
PCB 164 (2,3,3',4',5',6-Hexachlorobiphenyl)
PCB 165 (2,3,3',5,5',6-Hexachlorobiphenyl)
PCB 166 (2,3,4,4',5,6-Hexachlorobiphenyl)
PCB 167 (2,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 168 (2,3',4,4',5',6-Hexachlorobiphenyl)
PCB 169 (3,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 17 (2,2',4-Trichlorobiphenyl)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)
PCB 171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)
PCB 172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)
PCB 173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)
PCB 174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)
PCB 175 (2,2',3,3',4,5',6-Heptachlorobiphenyl)
PCB 176 (2,2',3,3',4,6,6'-Heptachlorobiphenyl)
PCB 177 (2,2',3,3',4,6',6'-Heptachlorobiphenyl)
PCB 178 (2,2',3,3',5,5',6-Heptachlorobiphenyl)
PCB 179 (2,2',3,3',5,6,6'-Heptachlorobiphenyl)
PCB 18 (2,2',5-Trichlorobiphenyl)
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)
PCB 181 (2,2',3,4,4',5,6-Heptachlorobiphenyl)
PCB 182 (2,2',3,4,4',5,6'-Heptachlorobiphenyl)
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)
PCB 184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)
PCB 185 (2,2',3,4,5,5',6-Heptachlorobiphenyl)
PCB 186 (2,2',3,4,5,6,6'-Heptachlorobiphenyl)
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)
PCB 188 (2,2',3,4',5,6,6'-Heptachlorobiphenyl)
PCB 189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)
PCB 19 (2,2',6-Trichlorobiphenyl)
PCB 190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)
PCB 191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)
PCB 192 (2,3,3',4,5,5',6-Heptachlorobiphenyl)

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PCB 193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)
PCB 196 (2,2',3,3',4,4',5,6'-Octachlorobiphenyl)
PCB 197 (2,2',3,3',4,4',6,6'-Octachlorobiphenyl)
PCB 198 (2,2',3,3',4,5,5',6-Octachlorobiphenyl)
PCB 199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)
PCB 2 (3-Chlorobiphenyl)
PCB 20 (2,3,3'-Trichlorobiphenyl)
PCB 200 (2,2',3,3',4,5,6,6'-Octachlorobiphenyl)
PCB 201 (2,2',3,3',4,5',6,6'-Octachlorobiphenyl)
PCB 202 (2,2',3,3',5,5',6,6'-Octachlorobiphenyl)
PCB 203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)
PCB 204 (2,2',3,4,4',5,6,6'-Octachlorobiphenyl)
PCB 205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)
PCB 207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)
PCB 208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)
PCB 209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)
PCB 21 (2,3,4-Trichlorobiphenyl)
PCB 22 (2,3,4'-Trichlorobiphenyl)
PCB 23 (2,3,5-Trichlorobiphenyl)
PCB 24 (2,3,6-Trichlorobiphenyl)
PCB 25 (2,3',4-Trichlorobiphenyl)
PCB 26 (2,3',5-Trichlorobiphenyl)
PCB 27 (2,3',6-Trichlorobiphenyl)
PCB 28 (2,4,4'-Trichlorobiphenyl)
PCB 29 (2,4,5-Trichlorobiphenyl)
PCB 3 (4-Chlorobiphenyl)
PCB 30 (2,4,6-Trichlorobiphenyl)
PCB 31 (2,4',5-Trichlorobiphenyl)
PCB 32 (2,4',6-Trichlorobiphenyl)
PCB 33 (2,3',4'-Trichlorobiphenyl)
PCB 34 (2,3',5'-Trichlorobiphenyl)
PCB 35 (3,3',4-Trichlorobiphenyl)
PCB 36 (3,3',5-Trichlorobiphenyl)
PCB 37 (3,4,4'-Trichlorobiphenyl)
PCB 38 (3,4,5-Trichlorobiphenyl)
PCB 39 (3,4',5-Trichlorobiphenyl)
PCB 4 (2,2'-Dichlorobiphenyl)
PCB 40 (2,2',3,3'-Tetrachlorobiphenyl)

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PCB 41 (2,2',3,4-Tetrachlorobiphenyl)
PCB 42 (2,2',3,4'-Tetrachlorobiphenyl)
PCB 43 (2,2',3,5-Tetrachlorobiphenyl)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl)
PCB 45 (2,2',3,6-Tetrachlorobiphenyl)
PCB 46 (2,2',3,6'-Tetrachlorobiphenyl)
PCB 47 (2,2',4,4'-Tetrachlorobiphenyl)
PCB 48 (2,2',4,5-Tetrachlorobiphenyl)
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl)
PCB 5 (2,3-Dichlorobiphenyl)
PCB 50 (2,2',4,6-Tetrachlorobiphenyl)
PCB 51 (2,2',4,6'-Tetrachlorobiphenyl)
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl)
PCB 53 (2,2',5,6'-Tetrachlorobiphenyl)
PCB 54 (2,2',6,6'-Tetrachlorobiphenyl)
PCB 55 (2,3,3',4-Tetrachlorobiphenyl)
PCB 56 (2,3,3',4'-Tetrachlorobiphenyl)
PCB 57 (2,3,3',5-Tetrachlorobiphenyl)
PCB 58 (2,3,3',5'-Tetrachlorobiphenyl)
PCB 59 (2,3,3',6-Tetrachlorobiphenyl)
PCB 6 (2,3'-Dichlorobiphenyl)
PCB 60 (2,3,4,4'-Tetrachlorobiphenyl)
PCB 61 (2,3,4,5-Tetrachlorobiphenyl)
PCB 62 (2,3,4,6-Tetrachlorobiphenyl)
PCB 63 (2,3,4',5-Tetrachlorobiphenyl)
PCB 64 (2,3,4',6-Tetrachlorobiphenyl)
PCB 65 (2,3,5,6-Tetrachlorobiphenyl)
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl)
PCB 67 (2,3',4,5-Tetrachlorobiphenyl)
PCB 68 (2,3',4,5'-Tetrachlorobiphenyl)
PCB 69 (2,3',4,6-Tetrachlorobiphenyl)
PCB 7 (2,4-Dichlorobiphenyl)
PCB 70 (2,3',4',5-Tetrachlorobiphenyl)
PCB 71 (2,3',4',6-Tetrachlorobiphenyl)
PCB 72 (2,3',5,5'-Tetrachlorobiphenyl)
PCB 73 (2,3',5',6-Tetrachlorobiphenyl)
PCB 74 (2,4,4',5-Tetrachlorobiphenyl)
PCB 75 (2,4,4',6-Tetrachlorobiphenyl)
PCB 76 (2,3',4',5'-Tetrachlorobiphenyl)
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl)
PCB 78 (3,3',4,5-Tetrachlorobiphenyl)

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PCB 79 (3,3',4,5'-Tetrachlorobiphenyl)
PCB 8 (2,4'-Dichlorobiphenyl)
PCB 80 (3,3',5,5'-Tetrachlorobiphenyl)
PCB 81 (3,4,4',5-Tetrachlorobiphenyl)
PCB 82 (2,2',3,3',4-Pentachlorobiphenyl)
PCB 83 (2,2',3,3',5-Pentachlorobiphenyl)
PCB 84 (2,2',3,3',6-Pentachlorobiphenyl)
PCB 85 (2,2',3,4,4'-Pentachlorobiphenyl)
PCB 86 (2,2',3,4,5-Pentachlorobiphenyl)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl)
PCB 88 (2,2',3,4,6-Pentachlorobiphenyl)
PCB 89 (2,2',3,4,6'-Pentachlorobiphenyl)
PCB 9 (2,5-Dichlorobiphenyl)
PCB 90 (2,2',3,4',5-Pentachlorobiphenyl)
PCB 91 (2,2',3,4',6-Pentachlorobiphenyl)
PCB 92 (2,2',3,5,5'-Pentachlorobiphenyl)
PCB 93 (2,2',3,5,6-Pentachlorobiphenyl)
PCB 94 (2,2',3,5,6'-Pentachlorobiphenyl)
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl)
PCB 96 (2,2',3,6,6'-Pentachlorobiphenyl)
PCB 97 (2,2',3,4',5'-Pentachlorobiphenyl)
PCB 98 (2,2',3,4',6'-Pentachlorobiphenyl)
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl)

Solids (Organic)
Polychlorinated Naphthalenes (PCN) - Solids (022)
BU-TM-1102, BU-TM-1110; modified from EPA 1613B and EPA 8290A and ON MOECC E3431
GC/HRMS
Dichlorinated Naphthalenes
Heptachlorinated Naphthalenes
Hexachlorinated Naphthalenes
Monochlorinated Naphthalenes
Octachlorinated Naphthalenes
Total Pentachloronaphthalenes (Total PeCN)
Total Tetrachloronaphthalenes (Total TeCN)
Trichlorinated Naphthalenes

Solids (Organic)
Polycyclic Aromatic Hydrocarbons (PAH) - Solids (009)
BU-TM-1100, BU-TP-2100; modified from CARB 429 and EPA 3540C
GC/MS
Acenaphthene
Acenaphthylene
Anthracene

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Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Benzo(g,h,i)perylene
Benzo(k)fluoranthene
Chrysene
Dibenzo(a,h)anthracene
Fluoranthene
Fluorene
Indeno(1,2,3-cd)pyrene
Naphthalene
Phenanthrene
Pyrene

SPMD (Extract analysis only) (Organic)
Organochlorine (OC) Pesticides - SPMD (045)
BU-TM-1103 OC PESTICIDES; modified from EPA 1699
HRGC/MS
2,4'-DDD (o,p'-DDD)
2,4'-DDE (o,p'-DDE)
2,4'-DDT (o,p'-DDT)
4,4'-DDD (p,p'-DDD)
4,4'-DDE (p,p'-DDE)
4,4'-DDT (p,p'-DDT)
alpha-BHC
alpha-Chlordane
beta-HCH (beta-Hexachlorocyclohexane (b-HCH, b-BHC, beta-BHC, beta-Hexachlorocyclohexane)
cis-Heptachlor Epoxide
cis-Nonachlor
delta-HCH (d-HCH, d-BHC, delta-BHC, delta-Hexachlorocyclohexane)
Dieldrin
Endosulfan I (a-Endosulfan)
Endosulfan II (b-Endosulfan)
Endosulfan Sulfate
Endrin
gamma-Chlordane
Hexachlorobenzene
Lindane (gamma-BHC)
Methoxychlor
Mirex
Octachlorostyrene
Oxychlordane
Toxaphene 26 (Parlar 26)

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Toxaphene 50 (Parlar 50)

Toxaphene 62 (Parlar 62)

trans-Heptachlor epoxide

trans-Nonachlor

SPMD (Extract analysis only) (Organic)
Polycyclic Aromatic Hydrocarbons (PAH) - SPMD (044)
BU-TM-1100 ANALYSIS OF PAH; modified from CARB 429 and SM 3540 C

HRGC/MS

Acenaphthene

Acenaphthylene

Anthracene

Benzo(a)anthracene

Benzo(a)pyrene

Benzo(b)fluoranthene

Benzo(g,h,i)perylene

Benzo(k)fluoranthene

Chrysene

Dibenzo(a,h)anthracene

Fluoranthene

Fluorene

Indeno(1,2,3-cd)pyrene

Naphthalene

Phenanthrene

Pyrene

SPMD (Extracts only) (Organic)
Brominated Diphenyl Ethers (BDE) - SPMD (043)
BU-TM-1109 BDPE; modified from EPA 1614A

HRGC/MS

1,2-Bis(2,4,6-tribromophenoxy)ethane (BTBPE)

Decabromodiphenyl ethane

Hexabromobenzene (HBB)

PBDE 10 (2,6-Dibromodiphenyl ether)

PBDE 100 (2,2',4,4',6-Pentabromodiphenyl ether)

PBDE 105 (2,3,3',4,4'-Pentabromodiphenyl ether)

PBDE 11 (3,3'-Dibromodiphenyl ether)

PBDE 116 (2,3,4,5,6-Pentabromodiphenyl ether)

PBDE 118 (2,3',4,4',5-Pentabromodiphenyl ether)

PBDE 119 (2,3',4,4',6-Pentabromodiphenyl ether)

PBDE 12 (3,4-Dibromodiphenyl ether)

PBDE 120 (2,3',4,5,5'-Pentabromodiphenyl ether)

PBDE 126 (3,3',4,4',5-Pentabromodiphenyl ether)

PBDE 128 (2,2',3,3',4,4'-Hexabromodiphenyl ether)

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PBDE 13 (3,4'-Dibromodiphenyl ether)
PBDE 138 (2,2',3,4,4',5'-Hexabromodiphenyl ether)
PBDE 140 (2,2',3,4,4',6'-Hexabromodiphenyl ether)
PBDE 15 (4,4'-Dibromodiphenyl ether)
PBDE 153 (2,2',4,4',5,5'-Hexabromodiphenyl ether)
PBDE 154 (2,2',4,4',5,6'-Hexabromodiphenyl ether)
PBDE 155 (2,2',4,4',6,6'-Hexabromodiphenyl ether)
PBDE 166 (2,3,4,4',5,6-Hexabromodiphenyl ether)
PBDE 17 (2,2',4-Tribromodiphenyl ether)
PBDE 181 (2,2',3,4,4',5,6-Heptabromodiphenyl ether)
PBDE 183 (2,2',3,4,4',5',6-Heptabromodiphenyl ether)
PBDE 190 (2,3,3',4,4',5,6-Heptabromodiphenyl ether)
PBDE 203 (2,2',3,4,4',5,5',6-Octabromodiphenyl ether)
PBDE 206 (2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether)
PBDE 207 (2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether)
PBDE 208 (2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether)
PBDE 209 (2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether)
PBDE 25 (2,3',4-Tribromodiphenyl ether)
PBDE 28 (2,4,4'-Tribromodiphenyl ether)
PBDE 30 (2,4,6-Tribromodiphenyl ether)
PBDE 32 (2,4',6-Tribromodiphenyl ether)
PBDE 33 (2',3,4-Tribromodiphenyl ether)
PBDE 35 (3,3',4-Tribromodiphenyl ether)
PBDE 37 (3,4,4'-Tribromodiphenyl ether)
PBDE 47 (2,2',4,4'-Tetrabromodiphenyl ether)
PBDE 49 (2,2',4,5'-Tetrabromodiphenyl ether)
PBDE 51 (2,2',4,6'-Tetrabromodiphenyl ether)
PBDE 66 (2,3',4,4'-Tetrabromodiphenyl ether)
PBDE 7 (2,4-Dibromodiphenyl ether)
PBDE 71 (2,3',4',6-Tetrabromodiphenyl ether)
PBDE 75 (2,4,4',6-Tetrabromodiphenyl ether)
PBDE 77 (3,3',4,4'-Tetrabromodiphenyl ether)
PBDE 79 (3,3',4,5'-Tetrabromodiphenyl ether)
PBDE 8 (2,4'-Dibromodiphenyl ether)
PBDE 85 (2,2',3,4,4'-Pentabromodiphenyl ether)
PBDE 99 (2,2',4,4',5-Pentabromodiphenyl ether)
Pentabromoethylbenzene (PBEB)

SPMD (Extracts only) (Organic)
Dioxins and Furans (PCDD/PCDF) - SPMD (040)
BU-TM-1107 PCDD_F; modified from EPA 1613B
GC/HRMS
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)

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1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-HxCDD)
1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-HxCDF)
1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,6,7,8-HxCDD)
1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-HxCDF)
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-PeCDD)
1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-PeCDF)
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-HxCDD)
1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-HxCDF)
2,3,4,6,7,8-HxCDF
2,3,4,7,8-PeCDF
2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)
2,3,7,8-Tetrachlorodibenzofuran (2,3,7,8-TCDF)
Octachlorodibenzo-p-dioxin (OCDD, 1,2,3,4,6,7,8,9-Octachloro dibenzo-p-dioxin)
Octachlorodibenzofuran (OCDF, 1,2,3,4,6,7,8,9-Octachlorodibenzofuran)
Total Heptachlorodibenzo-p-dioxins (Total HpCDD)
Total Heptachlorodibenzofurans (Total HpCDF)
Total Hexachlorodibenzo-p-dioxins (Total HxCDD)
Total Hexachlorodibenzofurans (Total HxCDF)
Total Pentachlorodibenzo-p-dioxins (Total PeCDD)
Total Pentachlorodibenzofurans (Total PeCDF)
Total Tetrachlorodibenzo-p-dioxins (Total TCDD)
Total Tetrachlorodibenzofurans (Total TCDF)

SPMD (Extracts only) (Organic)
Polychlorinated Biphenyls (PCB) Congeners - SPMD (042)
BU-TM-1105 PCB Congeners; modified from EPA 1668
HRGC/MS
PCB 1 (2-Chlorobiphenyl)
PCB 10 (2,6-Dichlorobiphenyl)
PCB 100 (2,2',4,4',6-Pentachlorobiphenyl)
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl)
PCB 102 (2,2',4,5,6'-Pentachlorobiphenyl)
PCB 103 (2,2',4,5',6-Pentachlorobiphenyl)
PCB 104 (2,2',4,6,6'-Pentachlorobiphenyl)
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl)
PCB 106 (2,3,3',4,5-Pentachlorobiphenyl)
PCB 107 (2,3,3',4',5-Pentachlorobiphenyl)
PCB 108 (2,3,3',4,5'-Pentachlorobiphenyl)
PCB 109 (2,3,3',4,6-Pentachlorobiphenyl)
PCB 11 (3,3'-Dichlorobiphenyl)
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl)

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PCB 111 (2,3,3',5,5'-Pentachlorobiphenyl)
PCB 112 (2,3,3',5,6-Pentachlorobiphenyl)
PCB 113 (2,3,3',5',6-Pentachlorobiphenyl)
PCB 114 (2,3,4,4',5-Pentachlorobiphenyl)
PCB 115 (2,3,4,4',6-Pentachlorobiphenyl)
PCB 116 (2,3,4,5,6-Pentachlorobiphenyl)
PCB 117 (2,3,4',5,6-Pentachlorobiphenyl)
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl)
PCB 119 (2,3',4,4',6-Pentachlorobiphenyl)
PCB 12 (3,4-Dichlorobiphenyl)
PCB 120 (2,3',4,5,5'-Pentachlorobiphenyl)
PCB 121 (2,3',4,5',6-Pentachlorobiphenyl)
PCB 122 (2,3,3',4',5'-Pentachlorobiphenyl)
PCB 123 (2,3',4,4',5'-Pentachlorobiphenyl)
PCB 124 (2,3',4',5,5'-Pentachlorobiphenyl)
PCB 125 (2,3',4',5',6-Pentachlorobiphenyl)
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl)
PCB 127 (3,3',4,5,5'-Pentachlorobiphenyl)
PCB 128 (2,2',3,3',4,4'-Pentachlorobiphenyl)
PCB 129 (2,2',3,3',4,5-Hexachlorobiphenyl)
PCB 13 (3,4'-Dichlorobiphenyl)
PCB 130 (2,2',3,3',4,5'-Hexachlorobiphenyl)
PCB 131 (2,2',3,3',4,6-Hexachlorobiphenyl)
PCB 132 (2,2',3,3',4,6'-Hexachlorobiphenyl)
PCB 133 (2,2',3,3',5,5'-Hexachlorobiphenyl)
PCB 134 (2,2',3,3',5,6-Hexachlorobiphenyl)
PCB 135 (2,2',3,3',5,6'-Hexachlorobiphenyl)
PCB 136 (2,2',3,3',6,6'-Hexachlorobiphenyl)
PCB 137 (2,2',3,4,4',5-Hexachlorobiphenyl)
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl)
PCB 139 (2,2',3,4,4',6-Hexachlorobiphenyl)
PCB 14 (3,5-Dichlorobiphenyl)
PCB 140 (2,2',3,4,4',6'-Hexachlorobiphenyl)
PCB 141 (2,2',3,4,5,5'-Hexachlorobiphenyl)
PCB 142 (2,2',3,4,5,6-Hexachlorobiphenyl)
PCB 143 (2,2',3,4,5,6'-Hexachlorobiphenyl)
PCB 144 (2,2',3,4,5',6-Hexachlorobiphenyl)
PCB 145 (2,2',3,4,6,6'-Hexachlorobiphenyl)
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl)
PCB 147 (2,2',3,4',5,6-Hexachlorobiphenyl)
PCB 148 (2,2',3,4',5,6'-Hexachlorobiphenyl)

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PCB 149 (2,2',3,4',5',6-Hexachlorobiphenyl)
PCB 15 (4,4'-Dichlorobiphenyl)
PCB 150 (2,2',3,4',6,6'-Hexachlorobiphenyl)
PCB 151 (2,2',3,5,5',6-Hexachlorobiphenyl)
PCB 152 (2,2',3,5,6,6'-Hexachlorobiphenyl)
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl)
PCB 154 (2,2',4,4',5,6'-Hexachlorobiphenyl)
PCB 155 (2,2',4,4',6,6'-Hexachlorobiphenyl)
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl)
PCB 157 (2,3,3',4,4',5'-Hexachlorobiphenyl)
PCB 158 (2,3,3',4,4',6-Hexachlorobiphenyl)
PCB 159 (2,3,3',4,5,5'-Hexachlorobiphenyl)
PCB 16 (2,2',3-Trichlorobiphenyl)
PCB 160 (2,3,3',4,5,6-Hexachlorobiphenyl)
PCB 161 (2,3,3',4,5',6-Hexachlorobiphenyl)
PCB 162 (2,3,3',4',5,5'-Hexachlorobiphenyl)
PCB 163 (2,3,3',4',5,6-Hexachlorobiphenyl)
PCB 164 (2,3,3',4',5',6-Hexachlorobiphenyl)
PCB 165 (2,3,3',5,5',6-Hexachlorobiphenyl)
PCB 166 (2,3,4,4',5,6-Hexachlorobiphenyl)
PCB 167 (2,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 168 (2,3',4,4',5',6-Hexachlorobiphenyl)
PCB 169 (3,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 17 (2,2',4-Trichlorobiphenyl)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)
PCB 171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)
PCB 172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)
PCB 173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)
PCB 174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)
PCB 175 (2,2',3,3',4,5',6-Heptachlorobiphenyl)
PCB 176 (2,2',3,3',4,6,6'-Heptachlorobiphenyl)
PCB 177 (2,2',3,3',4,6',6'-Heptachlorobiphenyl)
PCB 178 (2,2',3,3',5,5',6-Heptachlorobiphenyl)
PCB 179 (2,2',3,3',5,6,6'-Heptachlorobiphenyl)
PCB 18 (2,2',5-Trichlorobiphenyl)
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)
PCB 181 (2,2',3,4,4',5,6-Heptachlorobiphenyl)
PCB 182 (2,2',3,4,4',5,6'-Heptachlorobiphenyl)
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)
PCB 184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)
PCB 185 (2,2',3,4,5,5',6-Heptachlorobiphenyl)

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PCB 186 (2,2',3,4,5,6,6'-Heptachlorobiphenyl)
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)
PCB 188 (2,2',3,4',5,6,6'-Heptachlorobiphenyl)
PCB 189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)
PCB 19 (2,2',6-Trichlorobiphenyl)
PCB 190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)
PCB 191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)
PCB 192 (2,3,3',4,5,5',6-Heptachlorobiphenyl)
PCB 193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)
PCB 196 (2,2',3,3',4,4',5,6'-Octachlorobiphenyl)
PCB 197 (2,2',3,3',4,4',6,6'-Octachlorobiphenyl)
PCB 198 (2,2',3,3',4,5,5',6-Octachlorobiphenyl)
PCB 199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)
PCB 2 (3-Chlorobiphenyl)
PCB 20 (2,3,3'-Trichlorobiphenyl)
PCB 200 (2,2',3,3',4,5,6,6'-Octachlorobiphenyl)
PCB 201 (2,2',3,3',4,5',6,6'-Octachlorobiphenyl)
PCB 202 (2,2',3,3',5,5',6,6'-Octachlorobiphenyl)
PCB 203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)
PCB 204 (2,2',3,4,4',5,6,6'-Octachlorobiphenyl)
PCB 205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)
PCB 207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)
PCB 208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)
PCB 209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)
PCB 21 (2,3,4-Trichlorobiphenyl)
PCB 22 (2,3,4'-Trichlorobiphenyl)
PCB 23 (2,3,5-Trichlorobiphenyl)
PCB 24 (2,3,6-Trichlorobiphenyl)
PCB 25 (2,3',4-Trichlorobiphenyl)
PCB 26 (2,3',5-Trichlorobiphenyl)
PCB 27 (2,3',6-Trichlorobiphenyl)
PCB 28 (2,4,4'-Trichlorobiphenyl)
PCB 29 (2,4,5-Trichlorobiphenyl)
PCB 3 (4-Chlorobiphenyl)
PCB 30 (2,4,6-Trichlorobiphenyl)
PCB 31 (2,4',5-Trichlorobiphenyl)
PCB 32 (2,4',6-Trichlorobiphenyl)
PCB 33 (2,3',4'-Trichlorobiphenyl)

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PCB 34 (2,3',5'-Trichlorobiphenyl)
PCB 35 (3,3',4-Trichlorobiphenyl)
PCB 36 (3,3',5-Trichlorobiphenyl)
PCB 37 (3,4,4'-Trichlorobiphenyl)
PCB 38 (3,4,5-Trichlorobiphenyl)
PCB 39 (3,4',5-Trichlorobiphenyl)
PCB 4 (2,2'-Dichlorobiphenyl)
PCB 40 (2,2',3,3'-Tetrachlorobiphenyl)
PCB 41 (2,2',3,4-Tetrachlorobiphenyl)
PCB 42 (2,2',3,4'-Tetrachlorobiphenyl)
PCB 43 (2,2',3,5-Tetrachlorobiphenyl)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl)
PCB 45 (2,2',3,6-Tetrachlorobiphenyl)
PCB 46 (2,2',3,6'-Tetrachlorobiphenyl)
PCB 47 (2,2',4,4'-Tetrachlorobiphenyl)
PCB 48 (2,2',4,5-Tetrachlorobiphenyl)
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl)
PCB 5 (2,3-Dichlorobiphenyl)
PCB 50 (2,2',4,6-Tetrachlorobiphenyl)
PCB 51 (2,2',4,6'-Tetrachlorobiphenyl)
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl)
PCB 53 (2,2',5,6'-Tetrachlorobiphenyl)
PCB 54 (2,2',6,6'-Tetrachlorobiphenyl)
PCB 55 (2,3,3',4-Tetrachlorobiphenyl)
PCB 56 (2,3,3',4'-Tetrachlorobiphenyl)
PCB 57 (2,3,3',5-Tetrachlorobiphenyl)
PCB 58 (2,3,3',5'-Tetrachlorobiphenyl)
PCB 59 (2,3,3',6-Tetrachlorobiphenyl)
PCB 6 (2,3'-Dichlorobiphenyl)
PCB 60 (2,3,4,4'-Tetrachlorobiphenyl)
PCB 61 (2,3,4,5-Tetrachlorobiphenyl)
PCB 62 (2,3,4,6-Tetrachlorobiphenyl)
PCB 63 (2,3,4',5-Tetrachlorobiphenyl)
PCB 64 (2,3,4',6-Tetrachlorobiphenyl)
PCB 65 (2,3,5,6-Tetrachlorobiphenyl)
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl)
PCB 67 (2,3',4,5-Tetrachlorobiphenyl)
PCB 68 (2,3',4,5'-Tetrachlorobiphenyl)
PCB 69 (2,3',4,6-Tetrachlorobiphenyl)
PCB 7 (2,4-Dichlorobiphenyl)
PCB 70 (2,3',4',5-Tetrachlorobiphenyl)

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PCB 71 (2,3',4',6-Tetrachlorobiphenyl)
PCB 72 (2,3',5,5'-Tetrachlorobiphenyl)
PCB 73 (2,3',5',6-Tetrachlorobiphenyl)
PCB 74 (2,4,4',5-Tetrachlorobiphenyl)
PCB 75 (2,4,4',6-Tetrachlorobiphenyl)
PCB 76 (2,3',4',5'-Tetrachlorobiphenyl)
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl)
PCB 78 (3,3',4,5-Tetrachlorobiphenyl)
PCB 79 (3,3',4,5'-Tetrachlorobiphenyl)
PCB 8 (2,4'-Dichlorobiphenyl)
PCB 80 (3,3',5,5'-Tetrachlorobiphenyl)
PCB 81 (3,4,4',5-Tetrachlorobiphenyl)
PCB 82 (2,2',3,3',4-Pentachlorobiphenyl)
PCB 83 (2,2',3,3',5-Pentachlorobiphenyl)
PCB 84 (2,2',3,3',6-Pentachlorobiphenyl)
PCB 85 (2,2',3,4,4'-Pentachlorobiphenyl)
PCB 86 (2,2',3,4,5-Pentachlorobiphenyl)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl)
PCB 88 (2,2',3,4,6-Pentachlorobiphenyl)
PCB 89 (2,2',3,4,6'-Pentachlorobiphenyl)
PCB 9 (2,5-Dichlorobiphenyl)
PCB 90 (2,2',3,4',5-Pentachlorobiphenyl)
PCB 91 (2,2',3,4',6-Pentachlorobiphenyl)
PCB 92 (2,2',3,5,5'-Pentachlorobiphenyl)
PCB 93 (2,2',3,5,6-Pentachlorobiphenyl)
PCB 94 (2,2',3,5,6'-Pentachlorobiphenyl)
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl)
PCB 96 (2,2',3,6,6'-Pentachlorobiphenyl)
PCB 97 (2,2',3,4',5'-Pentachlorobiphenyl)
PCB 98 (2,2',3,4',6'-Pentachlorobiphenyl)
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl)

Tissue (Organic)

Brominated Diphenyl Ethers (BDE) and Related Fire Retardants - Tissue (019)
BU-TM-1109, BU-TP-2109; modified from EPA 1614A

GC/HRMS
1,2-Bis(2,4,6-tribromophenoxy)ethane (BTBPE)
Decabromodiphenyl ethane
Hexabromobenzene (HBB)
PBDE 10 (2,6-Dibromodiphenyl ether)
PBDE 100 (2,2',4,4',6-Pentabromodiphenyl ether)
PBDE 105 (2,3,3',4,4'-Pentabromodiphenyl ether)
PBDE 11 (3,3'-Dibromodiphenyl ether)

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PBDE 116 (2,3,4,5,6-Pentabromodiphenyl ether)
PBDE 118 (2,3',4,4',5-Pentabromodiphenyl ether)
PBDE 119 (2,3',4,4',6-Pentabromodiphenyl ether)
PBDE 12 (3,4-Dibromodiphenyl ether)
PBDE 120 (2,3',4,5,5'-Pentabromodiphenyl ether)
PBDE 126 (3,3',4,4',5-Pentabromodiphenyl ether)
PBDE 128 (2,2',3,3',4,4'-Hexabromodiphenyl ether)
PBDE 13 (3,4'-Dibromodiphenyl ether)
PBDE 138 (2,2',3,4,4',5'-Hexabromodiphenyl ether)
PBDE 140 (2,2',3,4,4',6'-Hexabromodiphenyl ether)
PBDE 15 (4,4'-Dibromodiphenyl ether)
PBDE 153 (2,2',4,4',5,5'-Hexabromodiphenyl ether)
PBDE 154 (2,2',4,4',5,6'-Hexabromodiphenyl ether)
PBDE 155 (2,2',4,4',6,6'-Hexabromodiphenyl ether)
PBDE 166 (2,3,4,4',5,6-Hexabromodiphenyl ether)
PBDE 17 (2,2',4-Tribromodiphenyl ether)
PBDE 181 (2,2',3,4,4',5,6-Heptabromodiphenyl ether)
PBDE 183 (2,2',3,4,4',5',6-Heptabromodiphenyl ether)
PBDE 190 (2,3,3',4,4',5,6-Heptabromodiphenyl ether)
PBDE 203 (2,2',3,4,4',5,5',6-Octabromodiphenyl ether)
PBDE 206 (2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether)
PBDE 207 (2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether)
PBDE 208 (2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether)
PBDE 209 (2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether)
PBDE 25 (2,3',4-Tribromodiphenyl ether)
PBDE 28 (2,4,4'-Tribromodiphenyl ether)
PBDE 30 (2,4,6-Tribromodiphenyl ether)
PBDE 32 (2,4',6-Tribromodiphenyl ether)
PBDE 33 (2',3,4-Tribromodiphenyl ether)
PBDE 35 (3,3',4-Tribromodiphenyl ether)
PBDE 37 (3,4,4'-Tribromodiphenyl ether)
PBDE 47 (2,2',4,4'-Tetrabromodiphenyl ether)
PBDE 49 (2,2',4,5'-Tetrabromodiphenyl ether)
PBDE 51 (2,2',4,6'-Tetrabromodiphenyl ether)
PBDE 66 (2,3',4,4'-Tetrabromodiphenyl ether)
PBDE 7 (2,4-Dibromodiphenyl ether)
PBDE 71 (2,3',4',6-Tetrabromodiphenyl ether)
PBDE 75 (2,4,4',6-Tetrabromodiphenyl ether)
PBDE 77 (3,3',4,4'-Tetrabromodiphenyl ether)
PBDE 79 (3,3',4,5'-Tetrabromodiphenyl ether)
PBDE 8 (2,4'-Dibromodiphenyl ether)

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PBDE 85 (2,2',3,4,4'-Pentabromodiphenyl ether)

PBDE 99 (2,2',4,4',5-Pentabromodiphenyl ether)

Pentabromoethylbenzene (PBEB)

Tissue (Organic)

Dioxins and Furans (PCDD/PCDF) - Tissue (014)

BU-TM-1107, BU-TM-1110; modified from EPA 1613B and EPA 8290A

GC/HRMS

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)

1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)

1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-HxCDD)

1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-HxCDF)

1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)

1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,6,7,8-HxCDD)

1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-HxCDF)

1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-PeCDD)

1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-PeCDF)

1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-HxCDD)

1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-HxCDF)

2,3,4,6,7,8-HxCDF

2,3,4,7,8-PeCDF

2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)

2,3,7,8-Tetrachlorodibenzofuran (2,3,7,8-TCDF)

Octachlorodibenzo-p-dioxin (OCDD, 1,2,3,4,6,7,8,9-Octachloro dibenzo-p-dioxin)

Octachlorodibenzofuran (OCDF, 1,2,3,4,6,7,8,9-Octachlorodibenzofuran)

Total Heptachlorodibenzo-p-dioxins (Total HpCDD)

Total Heptachlorodibenzofurans (Total HpCDF)

Total Hexachlorodibenzo-p-dioxins (Total HxCDD)

Total Hexachlorodibenzofurans (Total HxCDF)

Total Pentachlorodibenzo-p-dioxins (Total PeCDD)

Total Pentachlorodibenzofurans (Total PeCDF)

Total Tetrachlorodibenzo-p-dioxins (Total TCDD)

Total Tetrachlorodibenzofurans (Total TCDF)

Tissue (Organic)

Organochlorine (OC) Pesticides - Tissue (033)

BU-TM-1103, BU-TP-2103; modified from EPA 1699

GC/HRMS

2,4'-DDD (o,p'-DDD)

2,4'-DDE (o,p'-DDE)

2,4'-DDT (o,p'-DDT)

4,4'-DDD (p,p'-DDD)

4,4'-DDE (p,p'-DDE)

4,4'-DDT (p,p'-DDT)

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alpha-BHC
alpha-Chlordane
beta-HCH (beta-Hexachlorocyclohexane (b-HCH, b-BHC, beta-BHC, beta-Hexachlorocyclohexane)
cis-Heptachlor Epoxide
cis-Nonachlor
delta-HCH (d-HCH, d-BHC, delta-BHC, delta-Hexachlorocyclohexane)
Dieldrin
Endosulfan I (a-Endosulfan)
Endosulfan II (b-Endosulfan)
Endosulfan Sulfate
Endrin
gamma-Chlordane
Hexachlorobenzene
Lindane (gamma-BHC)
Methoxychlor
Mirex
Octachlorostyrene
Oxychlordane
Toxaphene 26 (Parlar 26)
Toxaphene 50 (Parlar 50)
Toxaphene 62 (Parlar 62)
trans-Heptachlor epoxide
trans-Nonachlor

Tissue (Organic)
Polychlorinated Biphenyls (PCB) - Tissue (032)
BU-TM-1120; EPA 680
GC/MS
PCB 10 (2,6-Dichlorobiphenyl)
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl)
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl)
PCB 106 (2,3,3',4,5-Pentachlorobiphenyl)
PCB 107 (2,3,3',4',5-Pentachlorobiphenyl)
PCB 108 (2,3,3',4,5'-Pentachlorobiphenyl)
PCB 109 (2,3,3',4,6-Pentachlorobiphenyl)
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl)
PCB 111 (2,3,3',5,5'-Pentachlorobiphenyl)
PCB 114 (2,3,4,4',5-Pentachlorobiphenyl)
PCB 115 (2,3,4,4',6-Pentachlorobiphenyl)
PCB 116 (2,3,4,5,6-Pentachlorobiphenyl)
PCB 117 (2,3,4',5,6-Pentachlorobiphenyl)
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl)
PCB 12 (3,4-Dichlorobiphenyl)

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PCB 120 (2,3',4,5,5'-Pentachlorobiphenyl)
PCB 121 (2,3',4,5',6-Pentachlorobiphenyl)
PCB 123 (2,3',4,4',5'-Pentachlorobiphenyl)
PCB 125 (2,3',4',5',6-Pentachlorobiphenyl)
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl)
PCB 127 (3,3',4,5,5'-Pentachlorobiphenyl)
PCB 128 (2,2',3,3',4,4'-Pentachlorobiphenyl)
PCB 129 (2,2',3,3',4,5-Hexachlorobiphenyl)
PCB 13 (3,4'-Dichlorobiphenyl)
PCB 131 (2,2',3,3',4,6-Hexachlorobiphenyl)
PCB 132 (2,2',3,3',4,6'-Hexachlorobiphenyl)
PCB 135 (2,2',3,3',5,6'-Hexachlorobiphenyl)
PCB 137 (2,2',3,4,4',5-Hexachlorobiphenyl)
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl)
PCB 139 (2,2',3,4,4',6-Hexachlorobiphenyl)
PCB 141 (2,2',3,4,5,5'-Hexachlorobiphenyl)
PCB 142 (2,2',3,4,5,6-Hexachlorobiphenyl)
PCB 144 (2,2',3,4,5',6-Hexachlorobiphenyl)
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl)
PCB 149 (2,2',3,4',5',6-Hexachlorobiphenyl)
PCB 15 (4,4'-Dichlorobiphenyl)
PCB 151 (2,2',3,5,5',6-Hexachlorobiphenyl)
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl)
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl)
PCB 157 (2,3,3',4,4',5'-Hexachlorobiphenyl)
PCB 158 (2,3,3',4,4',6-Hexachlorobiphenyl)
PCB 159 (2,3,3',4,5,5'-Hexachlorobiphenyl)
PCB 16 (2,2',3-Trichlorobiphenyl)
PCB 160 (2,3,3',4,5,6-Hexachlorobiphenyl)
PCB 163 (2,3,3',4',5,6-Hexachlorobiphenyl)
PCB 165 (2,3,3',5,5',6-Hexachlorobiphenyl)
PCB 167 (2,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 168 (2,3',4,4',5',6-Hexachlorobiphenyl)
PCB 169 (3,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 17 (2,2',4-Trichlorobiphenyl)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)
PCB 171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)
PCB 172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)
PCB 174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)
PCB 177 (2,2',3,3',4,6',6'-Heptachlorobiphenyl)
PCB 18 (2,2',5-Trichlorobiphenyl)

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PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)
PCB 181 (2,2',3,4,4',5,6-Heptachlorobiphenyl)
PCB 182 (2,2',3,4,4',5,6'-Heptachlorobiphenyl)
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)
PCB 19 (2,2',6-Trichlorobiphenyl)
PCB 190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)
PCB 191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)
PCB 192 (2,3,3',4,5,5',6-Heptachlorobiphenyl)
PCB 193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)
PCB 196 (2,2',3,3',4,4',5,6'-Octachlorobiphenyl)
PCB 199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)
PCB 20 (2,3,3'-Trichlorobiphenyl)
PCB 203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)
PCB 205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)
PCB 207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)
PCB 208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)
PCB 209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)
PCB 21 (2,3,4-Trichlorobiphenyl)
PCB 22 (2,3,4'-Trichlorobiphenyl)
PCB 24 (2,3,6-Trichlorobiphenyl)
PCB 25 (2,3',4-Trichlorobiphenyl)
PCB 26 (2,3',5-Trichlorobiphenyl)
PCB 27 (2,3',6-Trichlorobiphenyl)
PCB 28 (2,4,4'-Trichlorobiphenyl)
PCB 31 (2,4',5-Trichlorobiphenyl)
PCB 32 (2,4',6-Trichlorobiphenyl)
PCB 33 (2,3',4'-Trichlorobiphenyl)
PCB 37 (3,4,4'-Trichlorobiphenyl)
PCB 4 (2,2'-Dichlorobiphenyl)
PCB 41 (2,2',3,4-Tetrachlorobiphenyl)
PCB 42 (2,2',3,4'-Tetrachlorobiphenyl)
PCB 43 (2,2',3,5-Tetrachlorobiphenyl)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl)
PCB 45 (2,2',3,6-Tetrachlorobiphenyl)
PCB 46 (2,2',3,6'-Tetrachlorobiphenyl)
PCB 47 (2,2',4,4'-Tetrachlorobiphenyl)
PCB 48 (2,2',4,5-Tetrachlorobiphenyl)

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PCB 49 (2,2',4,5'-Tetrachlorobiphenyl)
PCB 5 (2,3-Dichlorobiphenyl)
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl)
PCB 53 (2,2',5,6'-Tetrachlorobiphenyl)
PCB 56 (2,3,3',4'-Tetrachlorobiphenyl)
PCB 59 (2,3,3',6-Tetrachlorobiphenyl)
PCB 6 (2,3'-Dichlorobiphenyl)
PCB 60 (2,3,4,4'-Tetrachlorobiphenyl)
PCB 61 (2,3,4,5-Tetrachlorobiphenyl)
PCB 63 (2,3,4',5-Tetrachlorobiphenyl)
PCB 64 (2,3,4',6-Tetrachlorobiphenyl)
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl)
PCB 68 (2,3',4,5'-Tetrachlorobiphenyl)
PCB 7 (2,4-Dichlorobiphenyl)
PCB 70 (2,3',4',5-Tetrachlorobiphenyl)
PCB 71 (2,3',4',6-Tetrachlorobiphenyl)
PCB 73 (2,3',5',6-Tetrachlorobiphenyl)
PCB 74 (2,4,4',5-Tetrachlorobiphenyl)
PCB 75 (2,4,4',6-Tetrachlorobiphenyl)
PCB 76 (2,3',4',5'-Tetrachlorobiphenyl)
PCB 8 (2,4'-Dichlorobiphenyl)
PCB 80 (3,3',5,5'-Tetrachlorobiphenyl)
PCB 81 (3,4,4',5-Tetrachlorobiphenyl)
PCB 82 (2,2',3,3',4-Pentachlorobiphenyl)
PCB 83 (2,2',3,3',5-Pentachlorobiphenyl)
PCB 84 (2,2',3,3',6-Pentachlorobiphenyl)
PCB 85 (2,2',3,4,4'-Pentachlorobiphenyl)
PCB 86 (2,2',3,4,5-Pentachlorobiphenyl)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl)
PCB 89 (2,2',3,4,6'-Pentachlorobiphenyl)
PCB 9 (2,5-Dichlorobiphenyl)
PCB 90 (2,2',3,4',5-Pentachlorobiphenyl)
PCB 91 (2,2',3,4',6-Pentachlorobiphenyl)
PCB 92 (2,2',3,5,5'-Pentachlorobiphenyl)
PCB 93 (2,2',3,5,6-Pentachlorobiphenyl)
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl)
PCB 97 (2,2',3,4',5'-Pentachlorobiphenyl)
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl)

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Tissue (Organic)
Polychlorinated Biphenyls (PCB) Congeners - Tissue (041)
BU-TM-1105 PCB Congeners; modified from EPA 1668
HRGC/MS
PCB 1 (2-Chlorobiphenyl)
PCB 10 (2,6-Dichlorobiphenyl)
PCB 100 (2,2',4,4',6-Pentachlorobiphenyl)
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl)
PCB 102 (2,2',4,5,6'-Pentachlorobiphenyl)
PCB 103 (2,2',4,5',6-Pentachlorobiphenyl)
PCB 104 (2,2',4,6,6'-Pentachlorobiphenyl)
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl)
PCB 106 (2,3,3',4,5-Pentachlorobiphenyl)
PCB 107 (2,3,3',4',5-Pentachlorobiphenyl)
PCB 108 (2,3,3',4,5'-Pentachlorobiphenyl)
PCB 109 (2,3,3',4,6-Pentachlorobiphenyl)
PCB 11 (3,3'-Dichlorobiphenyl)
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl)
PCB 111 (2,3,3',5,5'-Pentachlorobiphenyl)
PCB 112 (2,3,3',5,6-Pentachlorobiphenyl)
PCB 113 (2,3,3',5',6-Pentachlorobiphenyl)
PCB 114 (2,3,4,4',5-Pentachlorobiphenyl)
PCB 115 (2,3,4,4',6-Pentachlorobiphenyl)
PCB 116 (2,3,4,5,6-Pentachlorobiphenyl)
PCB 117 (2,3,4',5,6-Pentachlorobiphenyl)
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl)
PCB 119 (2,3',4,4',6-Pentachlorobiphenyl)
PCB 12 (3,4-Dichlorobiphenyl)
PCB 120 (2,3',4,5,5'-Pentachlorobiphenyl)
PCB 121 (2,3',4,5',6-Pentachlorobiphenyl)
PCB 122 (2,3,3',4',5'-Pentachlorobiphenyl)
PCB 123 (2,3',4,4',5'-Pentachlorobiphenyl)
PCB 124 (2,3',4',5,5'-Pentachlorobiphenyl)
PCB 125 (2,3',4',5',6-Pentachlorobiphenyl)
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl)
PCB 127 (3,3',4,5,5'-Pentachlorobiphenyl)
PCB 128 (2,2',3,3',4,4'-Pentachlorobiphenyl)
PCB 129 (2,2',3,3',4,5-Hexachlorobiphenyl)
PCB 13 (3,4'-Dichlorobiphenyl)
PCB 130 (2,2',3,3',4,5'-Hexachlorobiphenyl)
PCB 131 (2,2',3,3',4,6-Hexachlorobiphenyl)
PCB 132 (2,2',3,3',4,6'-Hexachlorobiphenyl)

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PCB 133 (2,2',3,3',5,5'-Hexachlorobiphenyl)
PCB 134 (2,2',3,3',5,6-Hexachlorobiphenyl)
PCB 135 (2,2',3,3',5,6'-Hexachlorobiphenyl)
PCB 136 (2,2',3,3',6,6'-Hexachlorobiphenyl)
PCB 137 (2,2',3,4,4',5-Hexachlorobiphenyl)
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl)
PCB 139 (2,2',3,4,4',6-Hexachlorobiphenyl)
PCB 14 (3,5-Dichlorobiphenyl)
PCB 140 (2,2',3,4,4',6'-Hexachlorobiphenyl)
PCB 141 (2,2',3,4,5,5'-Hexachlorobiphenyl)
PCB 142 (2,2',3,4,5,6-Hexachlorobiphenyl)
PCB 143 (2,2',3,4,5,6'-Hexachlorobiphenyl)
PCB 144 (2,2',3,4,5',6-Hexachlorobiphenyl)
PCB 145 (2,2',3,4,6,6'-Hexachlorobiphenyl)
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl)
PCB 147 (2,2',3,4',5,6-Hexachlorobiphenyl)
PCB 148 (2,2',3,4',5,6'-Hexachlorobiphenyl)
PCB 149 (2,2',3,4',5',6-Hexachlorobiphenyl)
PCB 15 (4,4'-Dichlorobiphenyl)
PCB 150 (2,2',3,4',6,6'-Hexachlorobiphenyl)
PCB 151 (2,2',3,5,5',6-Hexachlorobiphenyl)
PCB 152 (2,2',3,5,6,6'-Hexachlorobiphenyl)
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl)
PCB 154 (2,2',4,4',5,6'-Hexachlorobiphenyl)
PCB 155 (2,2',4,4',6,6'-Hexachlorobiphenyl)
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl)
PCB 157 (2,3,3',4,4',5'-Hexachlorobiphenyl)
PCB 158 (2,3,3',4,4',6-Hexachlorobiphenyl)
PCB 159 (2,3,3',4,5,5'-Hexachlorobiphenyl)
PCB 16 (2,2',3-Trichlorobiphenyl)
PCB 160 (2,3,3',4,5,6-Hexachlorobiphenyl)
PCB 161 (2,3,3',4,5',6-Hexachlorobiphenyl)
PCB 162 (2,3,3',4',5,5'-Hexachlorobiphenyl)
PCB 163 (2,3,3',4',5,6-Hexachlorobiphenyl)
PCB 164 (2,3,3',4',5',6-Hexachlorobiphenyl)
PCB 165 (2,3,3',5,5',6-Hexachlorobiphenyl)
PCB 166 (2,3,4,4',5,6-Hexachlorobiphenyl)
PCB 167 (2,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 168 (2,3',4,4',5',6-Hexachlorobiphenyl)
PCB 169 (3,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 17 (2,2',4-Trichlorobiphenyl)

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PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)
PCB 171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)
PCB 172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)
PCB 173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)
PCB 174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)
PCB 175 (2,2',3,3',4,5',6-Heptachlorobiphenyl)
PCB 176 (2,2',3,3',4,6,6'-Heptachlorobiphenyl)
PCB 177 (2,2',3,3',4,6',6'-Heptachlorobiphenyl)
PCB 178 (2,2',3,3',5,5',6-Heptachlorobiphenyl)
PCB 179 (2,2',3,3',5,6,6'-Heptachlorobiphenyl)
PCB 18 (2,2',5-Trichlorobiphenyl)
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)
PCB 181 (2,2',3,4,4',5,6-Heptachlorobiphenyl)
PCB 182 (2,2',3,4,4',5,6'-Heptachlorobiphenyl)
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)
PCB 184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)
PCB 185 (2,2',3,4,5,5',6-Heptachlorobiphenyl)
PCB 186 (2,2',3,4,5,6,6'-Heptachlorobiphenyl)
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)
PCB 188 (2,2',3,4',5,6,6'-Heptachlorobiphenyl)
PCB 189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)
PCB 19 (2,2',6-Trichlorobiphenyl)
PCB 190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)
PCB 191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)
PCB 192 (2,3,3',4,5,5',6-Heptachlorobiphenyl)
PCB 193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)
PCB 196 (2,2',3,3',4,4',5,6'-Octachlorobiphenyl)
PCB 197 (2,2',3,3',4,4',6,6'-Octachlorobiphenyl)
PCB 198 (2,2',3,3',4,5,5',6-Octachlorobiphenyl)
PCB 199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)
PCB 2 (3-Chlorobiphenyl)
PCB 20 (2,3,3'-Trichlorobiphenyl)
PCB 200 (2,2',3,3',4,5,6,6'-Octachlorobiphenyl)
PCB 201 (2,2',3,3',4,5',6,6'-Octachlorobiphenyl)
PCB 202 (2,2',3,3',5,5',6,6'-Octachlorobiphenyl)
PCB 203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)
PCB 204 (2,2',3,4,4',5,6,6'-Octachlorobiphenyl)
PCB 205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)

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PCB 207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)
PCB 208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)
PCB 209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)
PCB 21 (2,3,4-Trichlorobiphenyl)
PCB 22 (2,3,4'-Trichlorobiphenyl)
PCB 23 (2,3,5-Trichlorobiphenyl)
PCB 24 (2,3,6-Trichlorobiphenyl)
PCB 25 (2,3',4-Trichlorobiphenyl)
PCB 26 (2,3',5-Trichlorobiphenyl)
PCB 27 (2,3',6-Trichlorobiphenyl)
PCB 28 (2,4,4'-Trichlorobiphenyl)
PCB 29 (2,4,5-Trichlorobiphenyl)
PCB 3 (4-Chlorobiphenyl)
PCB 30 (2,4,6-Trichlorobiphenyl)
PCB 31 (2,4',5-Trichlorobiphenyl)
PCB 32 (2,4',6-Trichlorobiphenyl)
PCB 33 (2,3',4'-Trichlorobiphenyl)
PCB 34 (2,3',5'-Trichlorobiphenyl)
PCB 35 (3,3',4-Trichlorobiphenyl)
PCB 36 (3,3',5-Trichlorobiphenyl)
PCB 37 (3,4,4'-Trichlorobiphenyl)
PCB 38 (3,4,5-Trichlorobiphenyl)
PCB 39 (3,4',5-Trichlorobiphenyl)
PCB 4 (2,2'-Dichlorobiphenyl)
PCB 40 (2,2',3,3'-Tetrachlorobiphenyl)
PCB 41 (2,2',3,4-Tetrachlorobiphenyl)
PCB 42 (2,2',3,4'-Tetrachlorobiphenyl)
PCB 43 (2,2',3,5-Tetrachlorobiphenyl)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl)
PCB 45 (2,2',3,6-Tetrachlorobiphenyl)
PCB 46 (2,2',3,6'-Tetrachlorobiphenyl)
PCB 47 (2,2',4,4'-Tetrachlorobiphenyl)
PCB 48 (2,2',4,5-Tetrachlorobiphenyl)
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl)
PCB 5 (2,3-Dichlorobiphenyl)
PCB 50 (2,2',4,6-Tetrachlorobiphenyl)
PCB 51 (2,2',4,6'-Tetrachlorobiphenyl)
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl)
PCB 53 (2,2',5,6'-Tetrachlorobiphenyl)
PCB 54 (2,2',6,6'-Tetrachlorobiphenyl)
PCB 55 (2,3,3',4-Tetrachlorobiphenyl)

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PCB 56 (2,3,3',4'-Tetrachlorobiphenyl)
PCB 57 (2,3,3',5-Tetrachlorobiphenyl)
PCB 58 (2,3,3',5'-Tetrachlorobiphenyl)
PCB 59 (2,3,3',6-Tetrachlorobiphenyl)
PCB 6 (2,3'-Dichlorobiphenyl)
PCB 60 (2,3,4,4'-Tetrachlorobiphenyl)
PCB 61 (2,3,4,5-Tetrachlorobiphenyl)
PCB 62 (2,3,4,6-Tetrachlorobiphenyl)
PCB 63 (2,3,4',5-Tetrachlorobiphenyl)
PCB 64 (2,3,4',6-Tetrachlorobiphenyl)
PCB 65 (2,3,5,6-Tetrachlorobiphenyl)
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl)
PCB 67 (2,3',4,5-Tetrachlorobiphenyl)
PCB 68 (2,3',4,5'-Tetrachlorobiphenyl)
PCB 69 (2,3',4,6-Tetrachlorobiphenyl)
PCB 7 (2,4-Dichlorobiphenyl)
PCB 70 (2,3',4',5-Tetrachlorobiphenyl)
PCB 71 (2,3',4',6-Tetrachlorobiphenyl)
PCB 72 (2,3',5,5'-Tetrachlorobiphenyl)
PCB 73 (2,3',5',6-Tetrachlorobiphenyl)
PCB 74 (2,4,4',5-Tetrachlorobiphenyl)
PCB 75 (2,4,4',6-Tetrachlorobiphenyl)
PCB 76 (2,3',4',5'-Tetrachlorobiphenyl)
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl)
PCB 78 (3,3',4,5-Tetrachlorobiphenyl)
PCB 79 (3,3',4,5'-Tetrachlorobiphenyl)
PCB 8 (2,4'-Dichlorobiphenyl)
PCB 80 (3,3',5,5'-Tetrachlorobiphenyl)
PCB 81 (3,4,4',5-Tetrachlorobiphenyl)
PCB 82 (2,2',3,3',4-Pentachlorobiphenyl)
PCB 83 (2,2',3,3',5-Pentachlorobiphenyl)
PCB 84 (2,2',3,3',6-Pentachlorobiphenyl)
PCB 85 (2,2',3,4,4'-Pentachlorobiphenyl)
PCB 86 (2,2',3,4,5-Pentachlorobiphenyl)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl)
PCB 88 (2,2',3,4,6-Pentachlorobiphenyl)
PCB 89 (2,2',3,4,6'-Pentachlorobiphenyl)
PCB 9 (2,5-Dichlorobiphenyl)
PCB 90 (2,2',3,4',5-Pentachlorobiphenyl)
PCB 91 (2,2',3,4',6-Pentachlorobiphenyl)
PCB 92 (2,2',3,5,5'-Pentachlorobiphenyl)

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PCB 93 (2,2',3,5,6-Pentachlorobiphenyl)

PCB 94 (2,2',3,5,6'-Pentachlorobiphenyl)

PCB 95 (2,2',3,5',6-Pentachlorobiphenyl)

PCB 96 (2,2',3,6,6'-Pentachlorobiphenyl)

PCB 97 (2,2',3,4',5'-Pentachlorobiphenyl)

PCB 98 (2,2',3,4',6'-Pentachlorobiphenyl)

PCB 99 (2,2',4,4',5-Pentachlorobiphenyl)

Tissue (Organic)

Polychlorinated Naphthalenes (PCN) - Tissue (027)

BU-TM-1102, BU-TM-1110; modified from EPA 1613B and EPA 8290A and ON MOECC E3431

GC/HRMS

Dichlorinated Naphthalenes

Heptachlorinated Naphthalenes

Hexachlorinated Naphthalenes

Monochlorinated Naphthalenes

Octachlorinated Naphthalenes

Total Pentachloronaphthalenes (Total PeCN)

Total Tetrachloronaphthalenes (Total TeCN)

Trichlorinated Naphthalenes

Water (Organic)

Brominated Diphenyl Ethers (BDE) and Related Fire Retardants - Water (017)

BU-TM-1109, BU-TM-1110; modified from EPA 1614A

GC/HRMS

1,2-Bis(2,4,6-tribromophenoxy)ethane (BTBPE)

Decabromodiphenyl ethane

Hexabromobenzene (HBB)

PBDE 10 (2,6-Dibromodiphenyl ether)

PBDE 100 (2,2',4,4',6-Pentabromodiphenyl ether)

PBDE 105 (2,3,3',4,4'-Pentabromodiphenyl ether)

PBDE 11 (3,3'-Dibromodiphenyl ether)

PBDE 116 (2,3,4,5,6-Pentabromodiphenyl ether)

PBDE 118 (2,3',4,4',5-Pentabromodiphenyl ether)

PBDE 119 (2,3',4,4',6-Pentabromodiphenyl ether)

PBDE 12 (3,4-Dibromodiphenyl ether)

PBDE 120 (2,3',4,5,5'-Pentabromodiphenyl ether)

PBDE 126 (3,3',4,4',5-Pentabromodiphenyl ether)

PBDE 128 (2,2',3,3',4,4'-Hexabromodiphenyl ether)

PBDE 13 (3,4'-Dibromodiphenyl ether)

PBDE 138 (2,2',3,4,4',5'-Hexabromodiphenyl ether)

PBDE 140 (2,2',3,4,4',6'-Hexabromodiphenyl ether)

PBDE 15 (4,4'-Dibromodiphenyl ether)

PBDE 153 (2,2',4,4',5,5'-Hexabromodiphenyl ether) (Partial (complete suspended on 8/5/2021))

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PBDE 154 (2,2',4,4',5,6'-Hexabromodiphenyl ether)
PBDE 155 (2,2',4,4',6,6'-Hexabromodiphenyl ether)
PBDE 166 (2,3,4,4',5,6-Hexabromodiphenyl ether)
PBDE 17 (2,2',4-Tribromodiphenyl ether)
PBDE 181 (2,2',3,4,4',5,6-Heptabromodiphenyl ether)
PBDE 183 (2,2',3,4,4',5',6-Heptabromodiphenyl ether)
PBDE 190 (2,3,3',4,4',5,6-Heptabromodiphenyl ether)
PBDE 203 (2,2',3,4,4',5,5',6-Octabromodiphenyl ether)
PBDE 206 (2,2',3,3',4,4',5,5',6-Nonabromodiphenyl ether)
PBDE 207 (2,2',3,3',4,4',5,6,6'-Nonabromodiphenyl ether)
PBDE 208 (2,2',3,3',4,5,5',6,6'-Nonabromodiphenyl ether)
PBDE 209 (2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether)
PBDE 25 (2,3',4-Tribromodiphenyl ether)
PBDE 28 (2,4,4'-Tribromodiphenyl ether)
PBDE 30 (2,4,6-Tribromodiphenyl ether)
PBDE 32 (2,4',6-Tribromodiphenyl ether)
PBDE 33 (2',3,4-Tribromodiphenyl ether)
PBDE 35 (3,3',4-Tribromodiphenyl ether)
PBDE 37 (3,4,4'-Tribromodiphenyl ether)
PBDE 47 (2,2',4,4'-Tetrabromodiphenyl ether)
PBDE 49 (2,2',4,5'-Tetrabromodiphenyl ether)
PBDE 51 (2,2',4,6'-Tetrabromodiphenyl ether)
PBDE 66 (2,3',4,4'-Tetrabromodiphenyl ether)
PBDE 7 (2,4-Dibromodiphenyl ether)
PBDE 71 (2,3',4',6-Tetrabromodiphenyl ether)
PBDE 75 (2,4,4',6-Tetrabromodiphenyl ether)
PBDE 77 (3,3',4,4'-Tetrabromodiphenyl ether)
PBDE 79 (3,3',4,5'-Tetrabromodiphenyl ether)
PBDE 8 (2,4'-Dibromodiphenyl ether)
PBDE 85 (2,2',3,4,4'-Pentabromodiphenyl ether)
PBDE 99 (2,2',4,4',5-Pentabromodiphenyl ether) (Replaced on 8/5/2021))
Pentabromoethylbenzene (PBEB)

Water (Organic) OSDWA †

Dioxins and Furans (PCDD/PCDF) - Water (003)
BU-TM-1107, BU-TM-1110; modified from EPA 1613B and EPA 8290A
GC/HRMS
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)
1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-HxCDD)
1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-HxCDF)
1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,6,7,8-HxCDD)

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1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-HxCDF)
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-PeCDD)
1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-PeCDF)
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-HxCDD)
1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-HxCDF)
2,3,4,6,7,8-HxCDF
2,3,4,7,8-PeCDF
2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)
2,3,7,8-Tetrachlorodibenzofuran (2,3,7,8-TCDF)
Octachlorodibenzo-p-dioxin (OCDD, 1,2,3,4,6,7,8,9-Octachloro dibenzo-p-dioxin)
Octachlorodibenzofuran (OCDF, 1,2,3,4,6,7,8,9-Octachlorodibenzofuran)
Total Heptachlorodibenzo-p-dioxins (Total HpCDD)
Total Heptachlorodibenzofurans (Total HpCDF)
Total Hexachlorodibenzo-p-dioxins (Total HxCDD)
Total Hexachlorodibenzofurans (Total HxCDF)
Total Pentachlorodibenzo-p-dioxins (Total PeCDD)
Total Pentachlorodibenzofurans (Total PeCDF)
Total Tetrachlorodibenzo-p-dioxins (Total TCDD)
Total Tetrachlorodibenzofurans (Total TCDF)

Water (Organic) OSDWA †
Nitrosamines - Water (012)
BU-TM-1106, BU-TP-2106; modified from ON MOECC E3388
GC/HRMS
N-Nitrosodimethylamine (NDMA)

Water (Organic)
Polychlorinated Biphenyls (PCB) - Water (037)
BU-TM-1105; modified from EPA 1668A and EPA 1668C
GC/HRMS
PCB 1 (2-Chlorobiphenyl)
PCB 10 (2,6-Dichlorobiphenyl)
PCB 100 (2,2',4,4',6-Pentachlorobiphenyl)
PCB 101 (2,2',4,5,5'-Pentachlorobiphenyl)
PCB 102 (2,2',4,5,6'-Pentachlorobiphenyl)
PCB 103 (2,2',4,5',6-Pentachlorobiphenyl)
PCB 104 (2,2',4,6,6'-Pentachlorobiphenyl)
PCB 105 (2,3,3',4,4'-Pentachlorobiphenyl)
PCB 106 (2,3,3',4,5-Pentachlorobiphenyl)
PCB 107 (2,3,3',4',5-Pentachlorobiphenyl)
PCB 108 (2,3,3',4,5'-Pentachlorobiphenyl)
PCB 109 (2,3,3',4,6-Pentachlorobiphenyl)
PCB 11 (3,3'-Dichlorobiphenyl)
PCB 110 (2,3,3',4',6-Pentachlorobiphenyl)

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PCB 111 (2,3,3',5,5'-Pentachlorobiphenyl)
PCB 112 (2,3,3',5,6-Pentachlorobiphenyl)
PCB 113 (2,3,3',5',6-Pentachlorobiphenyl)
PCB 114 (2,3,4,4',5-Pentachlorobiphenyl)
PCB 115 (2,3,4,4',6-Pentachlorobiphenyl)
PCB 116 (2,3,4,5,6-Pentachlorobiphenyl)
PCB 117 (2,3,4',5,6-Pentachlorobiphenyl)
PCB 118 (2,3',4,4',5-Pentachlorobiphenyl)
PCB 119 (2,3',4,4',6-Pentachlorobiphenyl)
PCB 12 (3,4-Dichlorobiphenyl)
PCB 120 (2,3',4,5,5'-Pentachlorobiphenyl)
PCB 121 (2,3',4,5',6-Pentachlorobiphenyl)
PCB 122 (2,3,3',4',5'-Pentachlorobiphenyl)
PCB 123 (2,3',4,4',5'-Pentachlorobiphenyl)
PCB 124 (2,3',4',5,5'-Pentachlorobiphenyl)
PCB 125 (2,3',4',5',6-Pentachlorobiphenyl)
PCB 126 (3,3',4,4',5-Pentachlorobiphenyl)
PCB 127 (3,3',4,5,5'-Pentachlorobiphenyl)
PCB 128 (2,2',3,3',4,4'-Pentachlorobiphenyl)
PCB 129 (2,2',3,3',4,5-Hexachlorobiphenyl)
PCB 13 (3,4'-Dichlorobiphenyl)
PCB 130 (2,2',3,3',4,5'-Hexachlorobiphenyl)
PCB 131 (2,2',3,3',4,6-Hexachlorobiphenyl)
PCB 132 (2,2',3,3',4,6'-Hexachlorobiphenyl)
PCB 133 (2,2',3,3',5,5'-Hexachlorobiphenyl)
PCB 134 (2,2',3,3',5,6-Hexachlorobiphenyl)
PCB 135 (2,2',3,3',5,6'-Hexachlorobiphenyl)
PCB 136 (2,2',3,3',6,6'-Hexachlorobiphenyl)
PCB 137 (2,2',3,4,4',5-Hexachlorobiphenyl)
PCB 138 (2,2',3,4,4',5'-Hexachlorobiphenyl)
PCB 139 (2,2',3,4,4',6-Hexachlorobiphenyl)
PCB 14 (3,5-Dichlorobiphenyl)
PCB 140 (2,2',3,4,4',6'-Hexachlorobiphenyl)
PCB 141 (2,2',3,4,5,5'-Hexachlorobiphenyl)
PCB 142 (2,2',3,4,5,6-Hexachlorobiphenyl)
PCB 143 (2,2',3,4,5,6'-Hexachlorobiphenyl)
PCB 144 (2,2',3,4,5',6-Hexachlorobiphenyl)
PCB 145 (2,2',3,4,6,6'-Hexachlorobiphenyl)
PCB 146 (2,2',3,4',5,5'-Hexachlorobiphenyl)
PCB 147 (2,2',3,4',5,6-Hexachlorobiphenyl)
PCB 148 (2,2',3,4',5,6'-Hexachlorobiphenyl)

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PCB 149 (2,2',3,4',5',6-Hexachlorobiphenyl)
PCB 15 (4,4'-Dichlorobiphenyl)
PCB 150 (2,2',3,4',6,6'-Hexachlorobiphenyl)
PCB 151 (2,2',3,5,5',6-Hexachlorobiphenyl)
PCB 152 (2,2',3,5,6,6'-Hexachlorobiphenyl)
PCB 153 (2,2',4,4',5,5'-Hexachlorobiphenyl)
PCB 154 (2,2',4,4',5,6'-Hexachlorobiphenyl)
PCB 155 (2,2',4,4',6,6'-Hexachlorobiphenyl)
PCB 156 (2,3,3',4,4',5-Hexachlorobiphenyl)
PCB 157 (2,3,3',4,4',5'-Hexachlorobiphenyl)
PCB 158 (2,3,3',4,4',6-Hexachlorobiphenyl)
PCB 159 (2,3,3',4,5,5'-Hexachlorobiphenyl)
PCB 16 (2,2',3-Trichlorobiphenyl)
PCB 160 (2,3,3',4,5,6-Hexachlorobiphenyl)
PCB 161 (2,3,3',4,5',6-Hexachlorobiphenyl)
PCB 162 (2,3,3',4',5,5'-Hexachlorobiphenyl)
PCB 163 (2,3,3',4',5,6-Hexachlorobiphenyl)
PCB 164 (2,3,3',4',5',6-Hexachlorobiphenyl)
PCB 165 (2,3,3',5,5',6-Hexachlorobiphenyl)
PCB 166 (2,3,4,4',5,6-Hexachlorobiphenyl)
PCB 167 (2,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 168 (2,3',4,4',5',6-Hexachlorobiphenyl)
PCB 169 (3,3',4,4',5,5'-Hexachlorobiphenyl)
PCB 17 (2,2',4-Trichlorobiphenyl)
PCB 170 (2,2',3,3',4,4',5-Heptachlorobiphenyl)
PCB 171 (2,2',3,3',4,4',6-Heptachlorobiphenyl)
PCB 172 (2,2',3,3',4,5,5'-Heptachlorobiphenyl)
PCB 173 (2,2',3,3',4,5,6-Heptachlorobiphenyl)
PCB 174 (2,2',3,3',4,5,6'-Heptachlorobiphenyl)
PCB 175 (2,2',3,3',4,5',6-Heptachlorobiphenyl)
PCB 176 (2,2',3,3',4,6,6'-Heptachlorobiphenyl)
PCB 177 (2,2',3,3',4,6',6'-Heptachlorobiphenyl)
PCB 178 (2,2',3,3',5,5',6-Heptachlorobiphenyl)
PCB 179 (2,2',3,3',5,6,6'-Heptachlorobiphenyl)
PCB 18 (2,2',5-Trichlorobiphenyl)
PCB 180 (2,2',3,4,4',5,5'-Heptachlorobiphenyl)
PCB 181 (2,2',3,4,4',5,6-Heptachlorobiphenyl)
PCB 182 (2,2',3,4,4',5,6'-Heptachlorobiphenyl)
PCB 183 (2,2',3,4,4',5',6-Heptachlorobiphenyl)
PCB 184 (2,2',3,4,4',6,6'-Heptachlorobiphenyl)
PCB 185 (2,2',3,4,5,5',6-Heptachlorobiphenyl)

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PCB 186 (2,2',3,4,5,6,6'-Heptachlorobiphenyl)
PCB 187 (2,2',3,4',5,5',6-Heptachlorobiphenyl)
PCB 188 (2,2',3,4',5,6,6'-Heptachlorobiphenyl)
PCB 189 (2,3,3',4,4',5,5'-Heptachlorobiphenyl)
PCB 19 (2,2',6-Trichlorobiphenyl)
PCB 190 (2,3,3',4,4',5,6-Heptachlorobiphenyl)
PCB 191 (2,3,3',4,4',5',6-Heptachlorobiphenyl)
PCB 192 (2,3,3',4,5,5',6-Heptachlorobiphenyl)
PCB 193 (2,3,3',4',5,5',6-Heptachlorobiphenyl)
PCB 194 (2,2',3,3',4,4',5,5'-Octachlorobiphenyl)
PCB 195 (2,2',3,3',4,4',5,6-Octachlorobiphenyl)
PCB 196 (2,2',3,3',4,4',5,6'-Octachlorobiphenyl)
PCB 197 (2,2',3,3',4,4',6,6'-Octachlorobiphenyl)
PCB 198 (2,2',3,3',4,5,5',6-Octachlorobiphenyl)
PCB 199 (2,2',3,3',4,5,5',6'-Octachlorobiphenyl)
PCB 2 (3-Chlorobiphenyl)
PCB 20 (2,3,3'-Trichlorobiphenyl)
PCB 200 (2,2',3,3',4,5,6,6'-Octachlorobiphenyl)
PCB 201 (2,2',3,3',4,5',6,6'-Octachlorobiphenyl)
PCB 202 (2,2',3,3',5,5',6,6'-Octachlorobiphenyl)
PCB 203 (2,2',3,4,4',5,5',6-Octachlorobiphenyl)
PCB 204 (2,2',3,4,4',5,6,6'-Octachlorobiphenyl)
PCB 205 (2,3,3',4,4',5,5',6-Octachlorobiphenyl)
PCB 206 (2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)
PCB 207 (2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl)
PCB 208 (2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl)
PCB 209 (2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl)
PCB 21 (2,3,4-Trichlorobiphenyl)
PCB 22 (2,3,4'-Trichlorobiphenyl)
PCB 23 (2,3,5-Trichlorobiphenyl)
PCB 24 (2,3,6-Trichlorobiphenyl)
PCB 25 (2,3',4-Trichlorobiphenyl)
PCB 26 (2,3',5-Trichlorobiphenyl)
PCB 27 (2,3',6-Trichlorobiphenyl)
PCB 28 (2,4,4'-Trichlorobiphenyl)
PCB 29 (2,4,5-Trichlorobiphenyl)
PCB 3 (4-Chlorobiphenyl)
PCB 30 (2,4,6-Trichlorobiphenyl)
PCB 31 (2,4',5-Trichlorobiphenyl)
PCB 32 (2,4',6-Trichlorobiphenyl)
PCB 33 (2,3',4'-Trichlorobiphenyl)

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PCB 34 (2,3',5'-Trichlorobiphenyl)
PCB 35 (3,3',4-Trichlorobiphenyl)
PCB 36 (3,3',5-Trichlorobiphenyl)
PCB 37 (3,4,4'-Trichlorobiphenyl)
PCB 38 (3,4,5-Trichlorobiphenyl)
PCB 39 (3,4',5-Trichlorobiphenyl)
PCB 4 (2,2'-Dichlorobiphenyl)
PCB 40 (2,2',3,3'-Tetrachlorobiphenyl)
PCB 41 (2,2',3,4-Tetrachlorobiphenyl)
PCB 42 (2,2',3,4'-Tetrachlorobiphenyl)
PCB 43 (2,2',3,5-Tetrachlorobiphenyl)
PCB 44 (2,2',3,5'-Tetrachlorobiphenyl)
PCB 45 (2,2',3,6-Tetrachlorobiphenyl)
PCB 46 (2,2',3,6'-Tetrachlorobiphenyl)
PCB 47 (2,2',4,4'-Tetrachlorobiphenyl)
PCB 48 (2,2',4,5-Tetrachlorobiphenyl)
PCB 49 (2,2',4,5'-Tetrachlorobiphenyl)
PCB 5 (2,3-Dichlorobiphenyl)
PCB 50 (2,2',4,6-Tetrachlorobiphenyl)
PCB 51 (2,2',4,6'-Tetrachlorobiphenyl)
PCB 52 (2,2',5,5'-Tetrachlorobiphenyl)
PCB 53 (2,2',5,6'-Tetrachlorobiphenyl)
PCB 54 (2,2',6,6'-Tetrachlorobiphenyl)
PCB 55 (2,3,3',4-Tetrachlorobiphenyl)
PCB 56 (2,3,3',4'-Tetrachlorobiphenyl)
PCB 57 (2,3,3',5-Tetrachlorobiphenyl)
PCB 58 (2,3,3',5'-Tetrachlorobiphenyl)
PCB 59 (2,3,3',6-Tetrachlorobiphenyl)
PCB 6 (2,3'-Dichlorobiphenyl)
PCB 60 (2,3,4,4'-Tetrachlorobiphenyl)
PCB 61 (2,3,4,5-Tetrachlorobiphenyl)
PCB 62 (2,3,4,6-Tetrachlorobiphenyl)
PCB 63 (2,3,4',5-Tetrachlorobiphenyl)
PCB 64 (2,3,4',6-Tetrachlorobiphenyl)
PCB 65 (2,3,5,6-Tetrachlorobiphenyl)
PCB 66 (2,3',4,4'-Tetrachlorobiphenyl)
PCB 67 (2,3',4,5-Tetrachlorobiphenyl)
PCB 68 (2,3',4,5'-Tetrachlorobiphenyl)
PCB 69 (2,3',4,6-Tetrachlorobiphenyl)
PCB 7 (2,4-Dichlorobiphenyl)
PCB 70 (2,3',4',5-Tetrachlorobiphenyl)

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PCB 71 (2,3',4',6-Tetrachlorobiphenyl)
PCB 72 (2,3',5,5'-Tetrachlorobiphenyl)
PCB 73 (2,3',5',6-Tetrachlorobiphenyl)
PCB 74 (2,4,4',5-Tetrachlorobiphenyl)
PCB 75 (2,4,4',6-Tetrachlorobiphenyl)
PCB 76 (2,3',4',5'-Tetrachlorobiphenyl)
PCB 77 (3,3',4,4'-Tetrachlorobiphenyl)
PCB 78 (3,3',4,5-Tetrachlorobiphenyl)
PCB 79 (3,3',4,5'-Tetrachlorobiphenyl)
PCB 8 (2,4'-Dichlorobiphenyl)
PCB 80 (3,3',5,5'-Tetrachlorobiphenyl)
PCB 81 (3,4,4',5-Tetrachlorobiphenyl)
PCB 82 (2,2',3,3',4-Pentachlorobiphenyl)
PCB 83 (2,2',3,3',5-Pentachlorobiphenyl)
PCB 84 (2,2',3,3',6-Pentachlorobiphenyl)
PCB 85 (2,2',3,4,4'-Pentachlorobiphenyl)
PCB 86 (2,2',3,4,5-Pentachlorobiphenyl)
PCB 87 (2,2',3,4,5'-Pentachlorobiphenyl)
PCB 88 (2,2',3,4,6-Pentachlorobiphenyl)
PCB 89 (2,2',3,4,6'-Pentachlorobiphenyl)
PCB 9 (2,5-Dichlorobiphenyl)
PCB 90 (2,2',3,4',5-Pentachlorobiphenyl)
PCB 91 (2,2',3,4',6-Pentachlorobiphenyl)
PCB 92 (2,2',3,5,5'-Pentachlorobiphenyl)
PCB 93 (2,2',3,5,6-Pentachlorobiphenyl)
PCB 94 (2,2',3,5,6'-Pentachlorobiphenyl)
PCB 95 (2,2',3,5',6-Pentachlorobiphenyl)
PCB 96 (2,2',3,6,6'-Pentachlorobiphenyl)
PCB 97 (2,2',3,4',5'-Pentachlorobiphenyl)
PCB 98 (2,2',3,4',6'-Pentachlorobiphenyl)
PCB 99 (2,2',4,4',5-Pentachlorobiphenyl)

Water (Organic) OSDWA †

Taste and Odour Compounds - Water (038)
BU-TM-1115; modified from EPA 8270D
HRGC/HRMS
2-Isobutyl-3-methoxypyrazine
2-Isopropyl-3-methoxypyrazine
2-Methylisoborneol (MIB)
2,3,6-Trichloroanisole
2,4,6-Trichloroanisole
3,4,5-Trichloroveratrole
Geosmin

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STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Effective Date: July 1, 2022

ALS Environmental Burlington - CANADA
AI Number: 199920
Activity No.: ACC20220002
Expiration Date: June 30, 2023

1435 Norjohn Ct Unit 1, Burlington, Canada L7L 0E6

Certificate Number: 05064

Air Emissions

Analyte	Method Name	Method Code	Type	AB
1005 - Antimony	EPA 0060	10003404	NELAP	LA
1010 - Arsenic	EPA 0060	10003404	NELAP	LA
1015 - Barium	EPA 0060	10003404	NELAP	LA
1020 - Beryllium	EPA 0060	10003404	NELAP	LA
1030 - Cadmium	EPA 0060	10003404	NELAP	LA
1050 - Cobalt	EPA 0060	10003404	NELAP	LA
1055 - Copper	EPA 0060	10003404	NELAP	LA
1075 - Lead	EPA 0060	10003404	NELAP	LA
1090 - Manganese	EPA 0060	10003404	NELAP	LA
1095 - Mercury	EPA 0060	10003404	NELAP	LA
1105 - Nickel	EPA 0060	10003404	NELAP	LA
1140 - Selenium	EPA 0060	10003404	NELAP	LA
1150 - Silver	EPA 0060	10003404	NELAP	LA
1165 - Thallium	EPA 0060	10003404	NELAP	LA
1910 - Total Phosphorus	EPA 0060	10003404	NELAP	LA
1600 - Total chromium	EPA 0060	10003404	NELAP	LA
1190 - Zinc	EPA 0060	10003404	NELAP	LA
1415 - Extraction of Semivolatile Analytes Collected Using Method 0010 (Modified Method 5 Sampling Train)	EPA 3542	10140600	NELAP	LA
3847 - Modified Method 5 Sampling Train	EPA 3542	10140600	NELAP	LA
5160 - 1,1,1-Trichloroethane	EPA 5041A	10154800	NELAP	LA
5110 - 1,1,2,2-Tetrachloroethane	EPA 5041A	10154800	NELAP	LA
5165 - 1,1,2-Trichloroethane	EPA 5041A	10154800	NELAP	LA
4630 - 1,1-Dichloroethane	EPA 5041A	10154800	NELAP	LA
5180 - 1,2,3-Trichloropropane	EPA 5041A	10154800	NELAP	LA
4635 - 1,2-Dichloroethane (Ethylene dichloride)	EPA 5041A	10154800	NELAP	LA
4655 - 1,2-Dichloropropane	EPA 5041A	10154800	NELAP	LA
4410 - 2-Butanone (Methyl ethyl ketone, MEK)	EPA 5041A	10154800	NELAP	LA
4860 - 2-Hexanone	EPA 5041A	10154800	NELAP	LA
4315 - Acetone	EPA 5041A	10154800	NELAP	LA
4375 - Benzene	EPA 5041A	10154800	NELAP	LA
4395 - Bromodichloromethane	EPA 5041A	10154800	NELAP	LA
4400 - Bromoform	EPA 5041A	10154800	NELAP	LA
4450 - Carbon disulfide	EPA 5041A	10154800	NELAP	LA
4455 - Carbon tetrachloride	EPA 5041A	10154800	NELAP	LA
4475 - Chlorobenzene	EPA 5041A	10154800	NELAP	LA
4575 - Chlorodibromomethane (dibromochloromethane)	EPA 5041A	10154800	NELAP	LA
4485 - Chloroethane (Ethyl chloride)	EPA 5041A	10154800	NELAP	LA
4505 - Chloroform	EPA 5041A	10154800	NELAP	LA
4595 - Dibromomethane (Methylene bromide)	EPA 5041A	10154800	NELAP	LA
4765 - Ethylbenzene	EPA 5041A	10154800	NELAP	LA
4950 - Methyl bromide (Bromomethane)	EPA 5041A	10154800	NELAP	LA
4960 - Methyl chloride (Chloromethane)	EPA 5041A	10154800	NELAP	LA
4975 - Methylene chloride	EPA 5041A	10154800	NELAP	LA

Air Emissions

Analyte	Method Name	Method Code	Type	AB
(Dichloromethane)				
5100 - Styrene	EPA 5041A	10154800	NELAP	LA
5115 - Tetrachloroethylene (Perchloroethylene)	EPA 5041A	10154800	NELAP	LA
5140 - Toluene	EPA 5041A	10154800	NELAP	LA
5170 - Trichloroethene (Trichloroethylene)	EPA 5041A	10154800	NELAP	LA
5175 - Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 5041A	10154800	NELAP	LA
5235 - Vinyl chloride	EPA 5041A	10154800	NELAP	LA
100719 - Volatile Principle Organic Hazardous Constituents	EPA 5041A	10154800	NELAP	LA
4705 - cis & trans-1,2-Dichloroethene	EPA 5041A	10154800	NELAP	LA
4645 - cis-1,2-Dichloroethylene	EPA 5041A	10154800	NELAP	LA
4680 - cis-1,3-Dichloropropene	EPA 5041A	10154800	NELAP	LA
5240 - m+p-xylene	EPA 5041A	10154800	NELAP	LA
5245 - m-Xylene	EPA 5041A	10154800	NELAP	LA
5250 - o-Xylene	EPA 5041A	10154800	NELAP	LA
5255 - p-Xylene	EPA 5041A	10154800	NELAP	LA
4700 - trans-1,2-Dichloroethylene	EPA 5041A	10154800	NELAP	LA
4685 - trans-1,3-Dichloropropylene	EPA 5041A	10154800	NELAP	LA
1095 - Mercury	EPA 7470	10165603	NELAP	LA
1095 - Mercury	EPA 7470A	10165807	NELAP	LA
5160 - 1,1,1-Trichloroethane	EPA 8260B	10184802	NELAP	LA
5110 - 1,1,2,2-Tetrachloroethane	EPA 8260B	10184802	NELAP	LA
5165 - 1,1,2-Trichloroethane	EPA 8260B	10184802	NELAP	LA
4630 - 1,1-Dichloroethane	EPA 8260B	10184802	NELAP	LA
5180 - 1,2,3-Trichloropropane	EPA 8260B	10184802	NELAP	LA
4635 - 1,2-Dichloroethane (Ethylene dichloride)	EPA 8260B	10184802	NELAP	LA
4655 - 1,2-Dichloropropane	EPA 8260B	10184802	NELAP	LA
4410 - 2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260B	10184802	NELAP	LA
4860 - 2-Hexanone	EPA 8260B	10184802	NELAP	LA
4315 - Acetone	EPA 8260B	10184802	NELAP	LA
4375 - Benzene	EPA 8260B	10184802	NELAP	LA
4395 - Bromodichloromethane	EPA 8260B	10184802	NELAP	LA
4400 - Bromoform	EPA 8260B	10184802	NELAP	LA
4450 - Carbon disulfide	EPA 8260B	10184802	NELAP	LA
4455 - Carbon tetrachloride	EPA 8260B	10184802	NELAP	LA
4475 - Chlorobenzene	EPA 8260B	10184802	NELAP	LA
4575 - Chlorodibromomethane (dibromochloromethane)	EPA 8260B	10184802	NELAP	LA
4485 - Chloroethane (Ethyl chloride)	EPA 8260B	10184802	NELAP	LA
4505 - Chloroform	EPA 8260B	10184802	NELAP	LA
4595 - Dibromomethane (Methylene bromide)	EPA 8260B	10184802	NELAP	LA
4765 - Ethylbenzene	EPA 8260B	10184802	NELAP	LA
4950 - Methyl bromide (Bromomethane)	EPA 8260B	10184802	NELAP	LA
4960 - Methyl chloride (Chloromethane)	EPA 8260B	10184802	NELAP	LA
4975 - Methylene chloride (Dichloromethane)	EPA 8260B	10184802	NELAP	LA
5100 - Styrene	EPA 8260B	10184802	NELAP	LA
5115 - Tetrachloroethylene (Perchloroethylene)	EPA 8260B	10184802	NELAP	LA
5140 - Toluene	EPA 8260B	10184802	NELAP	LA

Air Emissions

Analyte	Method Name	Method Code	Type	AB
5170 - Trichloroethene (Trichloroethylene)	EPA 8260B	10184802	NELAP	LA
5175 - Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260B	10184802	NELAP	LA
5235 - Vinyl chloride	EPA 8260B	10184802	NELAP	LA
4705 - cis & trans-1,2-Dichloroethene	EPA 8260B	10184802	NELAP	LA
4645 - cis-1,2-Dichloroethylene	EPA 8260B	10184802	NELAP	LA
4680 - cis-1,3-Dichloropropene	EPA 8260B	10184802	NELAP	LA
5240 - m+p-xylene	EPA 8260B	10184802	NELAP	LA
5245 - m-Xylene	EPA 8260B	10184802	NELAP	LA
5250 - o-Xylene	EPA 8260B	10184802	NELAP	LA
5255 - p-Xylene	EPA 8260B	10184802	NELAP	LA
4700 - trans-1,2-Dichloroethylene	EPA 8260B	10184802	NELAP	LA
4685 - trans-1,3-Dichloropropylene	EPA 8260B	10184802	NELAP	LA
6715 - 1,2,4,5-Tetrachlorobenzene	EPA 8270	10185203	NELAP	LA
5155 - 1,2,4-Trichlorobenzene	EPA 8270	10185203	NELAP	LA
4610 - 1,2-Dichlorobenzene	EPA 8270	10185203	NELAP	LA
6885 - 1,3,5-Trinitrobenzene (1,3,5-TNB)	EPA 8270	10185203	NELAP	LA
4615 - 1,3-Dichlorobenzene	EPA 8270	10185203	NELAP	LA
6160 - 1,3-Dinitrobenzene (1,3-DNB)	EPA 8270	10185203	NELAP	LA
4835 - 1,3-Hexachlorobutadiene	EPA 8270	10185203	NELAP	LA
4620 - 1,4-Dichlorobenzene	EPA 8270	10185203	NELAP	LA
5790 - 1-Chloronaphthalene	EPA 8270	10185203	NELAP	LA
6425 - 1-Naphthylamine	EPA 8270	10185203	NELAP	LA
6735 - 2,3,4,6-Tetrachlorophenol	EPA 8270	10185203	NELAP	LA
6835 - 2,4,5-Trichlorophenol	EPA 8270	10185203	NELAP	LA
6840 - 2,4,6-Trichlorophenol	EPA 8270	10185203	NELAP	LA
6000 - 2,4-Dichlorophenol	EPA 8270	10185203	NELAP	LA
6130 - 2,4-Dimethylphenol	EPA 8270	10185203	NELAP	LA
6175 - 2,4-Dinitrophenol	EPA 8270	10185203	NELAP	LA
6185 - 2,4-Dinitrotoluene (2,4-DNT)	EPA 8270	10185203	NELAP	LA
6005 - 2,6-Dichlorophenol	EPA 8270	10185203	NELAP	LA
6190 - 2,6-Dinitrotoluene (2,6-DNT)	EPA 8270	10185203	NELAP	LA
5515 - 2-Acetylaminofluorene	EPA 8270	10185203	NELAP	LA
5795 - 2-Chloronaphthalene	EPA 8270	10185203	NELAP	LA
5800 - 2-Chlorophenol	EPA 8270	10185203	NELAP	LA
6360 - 2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270	10185203	NELAP	LA
5145 - 2-Methylaniline (o-Toluidine)	EPA 8270	10185203	NELAP	LA
6385 - 2-Methylnaphthalene	EPA 8270	10185203	NELAP	LA
6400 - 2-Methylphenol (o-Cresol)	EPA 8270	10185203	NELAP	LA
6430 - 2-Naphthylamine	EPA 8270	10185203	NELAP	LA
6460 - 2-Nitroaniline	EPA 8270	10185203	NELAP	LA
6490 - 2-Nitrophenol	EPA 8270	10185203	NELAP	LA
6355 - 3-Methylcholanthrene	EPA 8270	10185203	NELAP	LA
6405 - 3-Methylphenol (m-Cresol)	EPA 8270	10185203	NELAP	LA
6465 - 3-Nitroaniline	EPA 8270	10185203	NELAP	LA
5540 - 4-Aminobiphenyl	EPA 8270	10185203	NELAP	LA
5660 - 4-Bromophenyl phenyl ether	EPA 8270	10185203	NELAP	LA
5700 - 4-Chloro-3-methylphenol	EPA 8270	10185203	NELAP	LA
5745 - 4-Chloroaniline	EPA 8270	10185203	NELAP	LA
5825 - 4-Chlorophenyl phenylether	EPA 8270	10185203	NELAP	LA
6410 - 4-Methylphenol (p-Cresol)	EPA 8270	10185203	NELAP	LA
6470 - 4-Nitroaniline	EPA 8270	10185203	NELAP	LA
6500 - 4-Nitrophenol	EPA 8270	10185203	NELAP	LA
6115 - 7,12-Dimethylbenz(a) anthracene	EPA 8270	10185203	NELAP	LA

Air Emissions

Analyte	Method Name	Method Code	Type	AB
9417 - 7h-Dibenzo(c,g) carbazole	EPA 8270	10185203	NELAP	LA
5500 - Acenaphthene	EPA 8270	10185203	NELAP	LA
5505 - Acenaphthylene	EPA 8270	10185203	NELAP	LA
5510 Acetophenone	EPA 8270	10185203	NELAP	LA
5545 - Aniline	EPA 8270	10185203	NELAP	LA
5555 - Anthracene	EPA 8270	10185203	NELAP	LA
5575 - Benzo(a)anthracene	EPA 8270	10185203	NELAP	LA
5580 - Benzo(a)pyrene	EPA 8270	10185203	NELAP	LA
5585 - Benzo(b)fluoranthene	EPA 8270	10185203	NELAP	LA
5590 - Benzo(g,h,i)perylene	EPA 8270	10185203	NELAP	LA
5600 - Benzo(k)fluoranthene	EPA 8270	10185203	NELAP	LA
5630 - Benzyl alcohol	EPA 8270	10185203	NELAP	LA
5780 - Bis(2-Chloroisopropyl) ether (2,2-oxybis(1-chloropropane))	EPA 8270	10185203	NELAP	LA
5670 - Butyl benzyl phthalate	EPA 8270	10185203	NELAP	LA
5855 - Chrysene	EPA 8270	10185203	NELAP	LA
6065 - Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270	10185203	NELAP	LA
5925 - Di-n-butyl phthalate	EPA 8270	10185203	NELAP	LA
6200 - Di-n-octyl phthalate	EPA 8270	10185203	NELAP	LA
9354 - Dibenz(a, h) acridine	EPA 8270	10185203	NELAP	LA
5900 - Dibenz(a, j)acridine	EPA 8270	10185203	NELAP	LA
5890 - Dibenzo(a,e)pyrene	EPA 8270	10185203	NELAP	LA
9348 - Dibenzo(a,h) pyrene	EPA 8270	10185203	NELAP	LA
5895 - Dibenzo(a,h)anthracene	EPA 8270	10185203	NELAP	LA
9351 - Dibenzo(a,l) pyrene	EPA 8270	10185203	NELAP	LA
5905 - Dibenzofuran	EPA 8270	10185203	NELAP	LA
6070 - Diethyl phthalate	EPA 8270	10185203	NELAP	LA
6135 - Dimethyl phthalate	EPA 8270	10185203	NELAP	LA
8620 - Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	EPA 8270	10185203	NELAP	LA
6205 - Diphenylamine	EPA 8270	10185203	NELAP	LA
6260 - Ethyl methanesulfonate	EPA 8270	10185203	NELAP	LA
6265 - Fluoranthene	EPA 8270	10185203	NELAP	LA
6270 - Fluorene	EPA 8270	10185203	NELAP	LA
6275 - Hexachlorobenzene	EPA 8270	10185203	NELAP	LA
6285 - Hexachlorocyclopentadiene	EPA 8270	10185203	NELAP	LA
4840 - Hexachloroethane	EPA 8270	10185203	NELAP	LA
6295 - Hexachloropropene	EPA 8270	10185203	NELAP	LA
6315 - Indeno(1,2,3-cd)pyrene	EPA 8270	10185203	NELAP	LA
6320 - Isophorone	EPA 8270	10185203	NELAP	LA
6325 - Isosafrole	EPA 8270	10185203	NELAP	LA
6375 - Methyl methanesulfonate	EPA 8270	10185203	NELAP	LA
5005 - Naphthalene	EPA 8270	10185203	NELAP	LA
6590 - Pentachlorobenzene	EPA 8270	10185203	NELAP	LA
5035 - Pentachloroethane	EPA 8270	10185203	NELAP	LA
6600 - Pentachloronitrobenzene	EPA 8270	10185203	NELAP	LA
6605 - Pentachlorophenol	EPA 8270	10185203	NELAP	LA
6610 - Phenacetin	EPA 8270	10185203	NELAP	LA
6615 - Phenanthrene	EPA 8270	10185203	NELAP	LA
6625 - Phenol	EPA 8270	10185203	NELAP	LA
6665 - Pyrene	EPA 8270	10185203	NELAP	LA
6685 - Safrole	EPA 8270	10185203	NELAP	LA
5760 - bis(2-Chloroethoxy)methane	EPA 8270	10185203	NELAP	LA
5765 - bis(2-Chloroethyl) ether	EPA 8270	10185203	NELAP	LA

Air Emissions

Analyte	Method Name	Method Code	Type	AB
5025 - n-Nitroso-di-n-butylamine	EPA 8270	10185203	NELAP	LA
6545 - n-Nitrosodi-n-propylamine	EPA 8270	10185203	NELAP	LA
6525 - n-Nitrosodiethylamine	EPA 8270	10185203	NELAP	LA
6530 - n-Nitrosodimethylamine	EPA 8270	10185203	NELAP	LA
6535 - n-Nitrosodiphenylamine	EPA 8270	10185203	NELAP	LA
6550 - n-Nitrosomethylethylamine	EPA 8270	10185203	NELAP	LA
6555 - n-Nitrosomorpholine	EPA 8270	10185203	NELAP	LA
6560 - n-Nitrosopiperidine	EPA 8270	10185203	NELAP	LA
6565 - n-Nitrosopyrrolidine	EPA 8270	10185203	NELAP	LA
6105 - p-Dimethylaminoazobenzene	EPA 8270	10185203	NELAP	LA
9519 - 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290	10187209	NELAP	LA
9516 - 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290	10187209	NELAP	LA
9426 - 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	EPA 8290	10187209	NELAP	LA
9420 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	EPA 8290	10187209	NELAP	LA
9423 - 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	EPA 8290	10187209	NELAP	LA
9453 - 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	EPA 8290	10187209	NELAP	LA
9471 - 1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	EPA 8290	10187209	NELAP	LA
9456 - 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	EPA 8290	10187209	NELAP	LA
9474 - 1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	EPA 8290	10187209	NELAP	LA
9459 - 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	EPA 8290	10187209	NELAP	LA
9477 - 1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	EPA 8290	10187209	NELAP	LA
9540 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	EPA 8290	10187209	NELAP	LA
9543 - 1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	EPA 8290	10187209	NELAP	LA
9480 - 2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 8290	10187209	NELAP	LA
9549 - 2,3,4,7,8-Pentachlorodibenzofuran	EPA 8290	10187209	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA 8290	10187209	NELAP	LA
9612 - 2,3,7,8-Tetrachlorodibenzofuran	EPA 8290	10187209	NELAP	LA
100489 - Dibenzo-p-dioxins & dibenzofurans	EPA 8290	10187209	NELAP	LA
9438 - Total Hpcdd	EPA 8290	10187209	NELAP	LA
9444 - Total Hpcdf	EPA 8290	10187209	NELAP	LA
9468 - Total Hxcdd	EPA 8290	10187209	NELAP	LA
9483 - Total Hxcdf	EPA 8290	10187209	NELAP	LA
9555 - Total Pecdd	EPA 8290	10187209	NELAP	LA
9552 - Total Pecdf	EPA 8290	10187209	NELAP	LA
9609 - Total TCDD	EPA 8290	10187209	NELAP	LA
9615 - Total TCDF	EPA 8290	10187209	NELAP	LA
9519 - 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290A, Rev.2007	10187403	NELAP	LA

Air Emissions

Analyte	Method Name	Method Code	Type	AB
9516 - 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9426 - 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9420 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9423 - 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9453 - 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9471 - 1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9456 - 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9474 - 1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9459 - 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9477 - 1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9540 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9543 - 1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9480 - 2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 8290A, Rev.2007	10187403	NELAP	LA
9549 - 2,3,4,7,8-Pentachlorodibenzofuran	EPA 8290A, Rev.2007	10187403	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9612 - 2,3,7,8-Tetrachlorodibenzofuran	EPA 8290A, Rev.2007	10187403	NELAP	LA
100489 - Dibenzo-p-dioxins & dibenzofurans	EPA 8290A, Rev.2007	10187403	NELAP	LA
9438 - Total Hpcdd	EPA 8290A, Rev.2007	10187403	NELAP	LA
9444 - Total Hpcdf	EPA 8290A, Rev.2007	10187403	NELAP	LA
9468 - Total Hxcdd	EPA 8290A, Rev.2007	10187403	NELAP	LA
9483 - Total Hxcdf	EPA 8290A, Rev.2007	10187403	NELAP	LA
9555 - Total Pecdd	EPA 8290A, Rev.2007	10187403	NELAP	LA
9552 - Total Pecdf	EPA 8290A, Rev.2007	10187403	NELAP	LA
9609 - Total TCDD	EPA 8290A, Rev.2007	10187403	NELAP	LA
9615 - Total TCDF	EPA 8290A, Rev.2007	10187403	NELAP	LA
1575 - Chloride	EPA 9057	10199801	NELAP	LA
1515 - Ammonia as N	EPA CTM-027	10214707	NELAP	LA
9519 - 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA Method 23	10246705	NELAP	LA
9516 - 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA Method 23	10246705	NELAP	LA
9426 - 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	EPA Method 23	10246705	NELAP	LA
9420 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	EPA Method 23	10246705	NELAP	LA
9423 - 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	EPA Method 23	10246705	NELAP	LA

Air Emissions

Analyte	Method Name	Method Code	Type	AB
9453 - 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	EPA Method 23	10246705	NELAP	LA
9471 - 1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	EPA Method 23	10246705	NELAP	LA
9456 - 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	EPA Method 23	10246705	NELAP	LA
9474 - 1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	EPA Method 23	10246705	NELAP	LA
9459 - 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	EPA Method 23	10246705	NELAP	LA
9477 - 1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	EPA Method 23	10246705	NELAP	LA
9540 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	EPA Method 23	10246705	NELAP	LA
9543 - 1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	EPA Method 23	10246705	NELAP	LA
9480 - 2,3,4,6,7,8-Hexachlorodibenzofuran	EPA Method 23	10246705	NELAP	LA
9549 - 2,3,4,7,8-Pentachlorodibenzofuran	EPA Method 23	10246705	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA Method 23	10246705	NELAP	LA
9612 - 2,3,7,8-Tetrachlorodibenzofuran	EPA Method 23	10246705	NELAP	LA
9438 - Total Hpcdd	EPA Method 23	10246705	NELAP	LA
9444 - Total Hpcdf	EPA Method 23	10246705	NELAP	LA
9468 - Total Hxcdd	EPA Method 23	10246705	NELAP	LA
9483 - Total Hxcdf	EPA Method 23	10246705	NELAP	LA
9555 - Total Pecdd	EPA Method 23	10246705	NELAP	LA
9552 - Total Pecdf	EPA Method 23	10246705	NELAP	LA
9609 - Total TCDD	EPA Method 23	10246705	NELAP	LA
9615 - Total TCDF	EPA Method 23	10246705	NELAP	LA
5500 - Acenaphthene	EPA TO-13A	10248405	NELAP	LA
5505 - Acenaphthylene	EPA TO-13A	10248405	NELAP	LA
5555 - Anthracene	EPA TO-13A	10248405	NELAP	LA
5575 - Benzo(a)anthracene	EPA TO-13A	10248405	NELAP	LA
5580 - Benzo(a)pyrene	EPA TO-13A	10248405	NELAP	LA
5585 - Benzo(b)fluoranthene	EPA TO-13A	10248405	NELAP	LA
5605 - Benzo(e)pyrene	EPA TO-13A	10248405	NELAP	LA
5590 - Benzo(g,h,i)perylene	EPA TO-13A	10248405	NELAP	LA
5600 - Benzo(k)fluoranthene	EPA TO-13A	10248405	NELAP	LA
5855 - Chrysene	EPA TO-13A	10248405	NELAP	LA
5856 - Coronene	EPA TO-13A	10248405	NELAP	LA
5895 - Dibenzo(a,h)anthracene	EPA TO-13A	10248405	NELAP	LA
6265 - Fluoranthene	EPA TO-13A	10248405	NELAP	LA
6270 - Fluorene	EPA TO-13A	10248405	NELAP	LA
6315 - Indeno(1,2,3-cd)pyrene	EPA TO-13A	10248405	NELAP	LA
5005 - Naphthalene	EPA TO-13A	10248405	NELAP	LA
6608 - Perylene	EPA TO-13A	10248405	NELAP	LA
6615 - Phenanthrene	EPA TO-13A	10248405	NELAP	LA
6665 - Pyrene	EPA TO-13A	10248405	NELAP	LA
7355 - 4,4'-DDD	EPA TO-4A	10249204	NELAP	LA
7360 - 4,4'-DDE	EPA TO-4A	10249204	NELAP	LA
7365 - 4,4'-DDT	EPA TO-4A	10249204	NELAP	LA
8880 - Aroclor-1016 (PCB-1016)	EPA TO-4A	10249204	NELAP	LA
8885 - Aroclor-1221 (PCB-1221)	EPA TO-4A	10249204	NELAP	LA
8890 - Aroclor-1232 (PCB-1232)	EPA TO-4A	10249204	NELAP	LA
8895 - Aroclor-1242 (PCB-1242)	EPA TO-4A	10249204	NELAP	LA

Air Emissions

Analyte	Method Name	Method Code	Type	AB
8900 - Aroclor-1248 (PCB-1248)	EPA TO-4A	10249204	NELAP	LA
8905 - Aroclor-1254 (PCB-1254)	EPA TO-4A	10249204	NELAP	LA
8910 - Aroclor-1260 (PCB-1260)	EPA TO-4A	10249204	NELAP	LA
8913 - Aroclor 1268 (PCB 1268)	EPA TO-4A	10249204	NELAP	LA
9519 - 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA TO-9A	10249408	NELAP	LA
9516 - 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA TO-9A	10249408	NELAP	LA
9426 - 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	EPA TO-9A	10249408	NELAP	LA
9420 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	EPA TO-9A	10249408	NELAP	LA
9423 - 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	EPA TO-9A	10249408	NELAP	LA
9453 - 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	EPA TO-9A	10249408	NELAP	LA
9471 - 1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	EPA TO-9A	10249408	NELAP	LA
9456 - 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	EPA TO-9A	10249408	NELAP	LA
9474 - 1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	EPA TO-9A	10249408	NELAP	LA
9459 - 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	EPA TO-9A	10249408	NELAP	LA
9477 - 1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	EPA TO-9A	10249408	NELAP	LA
9540 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	EPA TO-9A	10249408	NELAP	LA
9543 - 1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	EPA TO-9A	10249408	NELAP	LA
9480 - 2,3,4,6,7,8-Hexachlorodibenzofuran	EPA TO-9A	10249408	NELAP	LA
9549 - 2,3,4,7,8-Pentachlorodibenzofuran	EPA TO-9A	10249408	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA TO-9A	10249408	NELAP	LA
9612 - 2,3,7,8-Tetrachlorodibenzofuran	EPA TO-9A	10249408	NELAP	LA
9438 - Total Hpcdd	EPA TO-9A	10249408	NELAP	LA
9444 - Total Hpcdf	EPA TO-9A	10249408	NELAP	LA
9468 - Total Hxcdd	EPA TO-9A	10249408	NELAP	LA
9483 - Total Hxcdf	EPA TO-9A	10249408	NELAP	LA
9555 - Total Pecdd	EPA TO-9A	10249408	NELAP	LA
9552 - Total Pecdf	EPA TO-9A	10249408	NELAP	LA
9609 - Total TCDD	EPA TO-9A	10249408	NELAP	LA
9615 - Total TCDF	EPA TO-9A	10249408	NELAP	LA
1095 - Mercury	EPA 101A	10401204	NELAP	LA
4467 - Condensible Particulate Matter	EPA 202	10403006	NELAP	LA
100798 - Extractable Condensable Particulate Matter	EPA 202	10403006	NELAP	LA
100799 - Non-extractable Condensable Particulate Matter	EPA 202	10403006	NELAP	LA
1541 - Bromine	EPA 26	10403108	NELAP	LA
1575 - Chloride	EPA 26	10403108	NELAP	LA
1580 - Chlorine	EPA 26	10403108	NELAP	LA
1770 - Hydrochloric acid (Hydrogen	EPA 26	10403108	NELAP	LA

Air Emissions

Analyte	Method Name	Method Code	Type	AB
chloride (gas only))				
1768 - Hydrogen Bromide (HBr)	EPA 26	10403108	NELAP	LA
1775 - Hydrogen fluoride (Hydrofluoric acid)	EPA 26	10403108	NELAP	LA
1541 - Bromine	EPA Method 26A	10403200	NELAP	LA
1575 - Chloride	EPA Method 26A	10403200	NELAP	LA
1580 - Chlorine	EPA Method 26A	10403200	NELAP	LA
1770 - Hydrochloric acid (Hydrogen chloride (gas only))	EPA Method 26A	10403200	NELAP	LA
1768 - Hydrogen Bromide (HBr)	EPA Method 26A	10403200	NELAP	LA
1775 - Hydrogen fluoride (Hydrofluoric acid)	EPA Method 26A	10403200	NELAP	LA
1095 - Mercury	EPA Method 29 (CVAA)	10403302	NELAP	LA
1000 - Aluminum	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1005 - Antimony	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1010 - Arsenic	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1015 - Barium	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1020 - Beryllium	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1030 - Cadmium	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1040 - Chromium	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1050 - Cobalt	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1055 - Copper	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1070 - Iron	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1075 - Lead	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1090 - Manganese	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1100 - Molybdenum	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1105 - Nickel	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1140 - Selenium	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1150 - Silver	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1165 - Thallium	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1175 - Tin	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1910 - Total Phosphorus	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1185 - Vanadium	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
1190 - Zinc	EPA Method 29 (ICP-MS)	10403700	NELAP	LA
3915 - Particulates	EPA 5	10404305	NELAP	LA
3915 - Particulates	EPA Method 5D	10404601	NELAP	LA
1095 - Mercury	ASTM D6784	30033104	NELAP	LA

Non Potable Water

Analyte	Method Name	Method Code	Type	AB
9519 - 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 1613B	10120602	NELAP	LA
9516 - 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 1613B	10120602	NELAP	LA
9426 - 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	EPA 1613B	10120602	NELAP	LA
9420 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	EPA 1613B	10120602	NELAP	LA
9423 - 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	EPA 1613B	10120602	NELAP	LA
9453 - 1,2,3,4,7,8-Hexachlorodibenzo-p-	EPA 1613B	10120602	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
dioxin (1,2,3,4,7,8-Hxcdd)				
9471 - 1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	EPA 1613B	10120602	NELAP	LA
9456 - 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	EPA 1613B	10120602	NELAP	LA
9474 - 1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	EPA 1613B	10120602	NELAP	LA
9459 - 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	EPA 1613B	10120602	NELAP	LA
9477 - 1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	EPA 1613B	10120602	NELAP	LA
9540 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	EPA 1613B	10120602	NELAP	LA
9543 - 1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	EPA 1613B	10120602	NELAP	LA
9480 - 2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 1613B	10120602	NELAP	LA
9549 - 2,3,4,7,8-Pentachlorodibenzofuran	EPA 1613B	10120602	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA 1613B	10120602	NELAP	LA
9612 - 2,3,7,8-Tetrachlorodibenzofuran	EPA 1613B	10120602	NELAP	LA
9438 - Total Hpcdd	EPA 1613B	10120602	NELAP	LA
9444 - Total Hpcdf	EPA 1613B	10120602	NELAP	LA
9468 - Total Hxcdd	EPA 1613B	10120602	NELAP	LA
9483 - Total Hxcdf	EPA 1613B	10120602	NELAP	LA
9555 - Total Pecdd	EPA 1613B	10120602	NELAP	LA
9552 - Total Pecdf	EPA 1613B	10120602	NELAP	LA
9609 - Total TCDD	EPA 1613B	10120602	NELAP	LA
9615 - Total TCDF	EPA 1613B	10120602	NELAP	LA
9873 - 2,2',3,3',4',5,6-Heptabromodiphenylether (BDE-177)	EPA 1614A	10120704	NELAP	LA
9902 - 2,2',3,3',4,4',5,5',6-Nonabromodiphenylether (BDE-206)	EPA 1614A	10120704	NELAP	LA
9892 - 2,2',3,3',4,4',5,6'-Octabromodiphenylether (BDE-196)	EPA 1614A	10120704	NELAP	LA
9903 - 2,2',3,3',4,4',5,6,6'-Nonabromodiphenylether (BDE-207)	EPA 1614A	10120704	NELAP	LA
9893 - 2,2',3,3',4,4',6,6'-Octabromodiphenylether (BDE-197)	EPA 1614A	10120704	NELAP	LA
9867 - 2,2',3,3',4,4',6-Heptabromodiphenylether (BDE-171)	EPA 1614A	10120704	NELAP	LA
9897 - 2,2',3,3',4,5',6,6'-Octabromodiphenylether (BDE-201)	EPA 1614A	10120704	NELAP	LA
9904 - 2,2',3,3',4,5,5',6,6'-Nonabromodiphenylether (BDE-208)	EPA 1614A	10120704	NELAP	LA
9896 - 2,2',3,3',4,5,6,6'-Octabromodiphenylether (BDE-200)	EPA 1614A	10120704	NELAP	LA
9872 - 2,2',3,3',4,6,6'-Heptabromodiphenylether (BDE-176)	EPA 1614A	10120704	NELAP	LA
9789 - 2,2',3,4',5-Pentabromodiphenylether (BDE-90)	EPA 1614A	10120704	NELAP	LA
9879 - 2,2',3,4,4',5',6-Heptabromodiphenylether (BDE-183)	EPA 1614A	10120704	NELAP	LA
9835 - 2,2',3,4,4',5'-Hexabromodiphenylether (BDE-138)	EPA 1614A	10120704	NELAP	LA
9899 - 2,2',3,4,4',5,5',6-	EPA 1614A	10120704	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
Octabromodiphenylether (BDE-203)				
9876 - 2,2',3,4,4',5,5'-Heptabromodiphenylether (BDE-180)	EPA 1614A	10120704	NELAP	LA
9878 - 2,2',3,4,4',5,6'-Heptabromodiphenylether (BDE-182)	EPA 1614A	10120704	NELAP	LA
9900 - 2,2',3,4,4',5,6,6'-Octabromodiphenylether (BDE-204)	EPA 1614A	10120704	NELAP	LA
9877 - 2,2',3,4,4',5,6-Heptabromodiphenylether (BDE-181)	EPA 1614A	10120704	NELAP	LA
9837 - 2,2',3,4,4',6'-Hexabromodiphenylether (BDE-140)	EPA 1614A	10120704	NELAP	LA
9880 - 2,2',3,4,4',6,6'-Heptabromodiphenylether (BDE-184)	EPA 1614A	10120704	NELAP	LA
9836 - 2,2',3,4,4',6-Hexabromodiphenylether (BDE-139)	EPA 1614A	10120704	NELAP	LA
9784 - 2,2',3,4,4'-Pentabromodiphenylether (BDE-85)	EPA 1614A	10120704	NELAP	LA
9850 - 2,2',4,4',5',6-Hexabromodiphenylether (BDE-154)	EPA 1614A	10120704	NELAP	LA
9569 - 2,2',4,4',5,5'-Hexabromodiphenyl ether (BDE-153)	EPA 1614A	10120704	NELAP	LA
9571 - 2,2',4,4',5-Pentabromodiphenyl ether (BDE-99)	EPA 1614A	10120704	NELAP	LA
9851 - 2,2',4,4',6,6'-Hexabromodiphenylether (BDE-155)	EPA 1614A	10120704	NELAP	LA
9572 - 2,2',4,4',6-Pentabromodiphenyl ether (BDE-100)	EPA 1614A	10120704	NELAP	LA
9773 - 2,2',4,4'-Tetrabromodiphenyl ether (BDE-47)	EPA 1614A	10120704	NELAP	LA
9747 - 2,2',4,5'-Tetrabromodiphenylether (BDE-49)	EPA 1614A	10120704	NELAP	LA
9716 - 2,2',4-Tribromodiphenylether (BDE-17)	EPA 1614A	10120704	NELAP	LA
9749 - 2,2'4,6'-Tetrabromodiphenylether (BDE-51)	EPA 1614A	10120704	NELAP	LA
9769 - 2,3',4',6-Tetrabromodiphenylether (BDE-71)	EPA 1614A	10120704	NELAP	LA
9815 - 2,3',4,4',5-Pentabromodiphenylether (BDE-118)	EPA 1614A	10120704	NELAP	LA
9764 - 2,3',4,4'-Tetrabromodiphenylether (BDE-66)	EPA 1614A	10120704	NELAP	LA
9724 - 2,3',4-Tribromodiphenylether (BDE-25)	EPA 1614A	10120704	NELAP	LA
9887 - 2,3,3',4,4',5',6-Heptabromodiphenylether (BDE-191)	EPA 1614A	10120704	NELAP	LA
9901 - 2,3,3',4,4',5,5',6-Octabromodiphenylether (BDE-205)	EPA 1614A	10120704	NELAP	LA
9886 - 2,3,3',4,4',5,6-Heptabromodiphenylether (BDE-190)	EPA 1614A	10120704	NELAP	LA
9852 - 2,3,3',4,4,'5-Hexabromodiphenylether (BDE-156)	EPA 1614A	10120704	NELAP	LA
9862 - 2,3,4,4',5,6-Hexabromodiphenylether (BDE-166)	EPA 1614A	10120704	NELAP	LA
9813 - 2,3,4,5,6-Pentabromodiphenylether (BDE-116)	EPA 1614A	10120704	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9720 - 2,3,4-Tribromodiphenylether (BDE-21)	EPA 1614A	10120704	NELAP	LA
9731 - 2,4',6-Tribromodiphenylether (BDE-32)	EPA 1614A	10120704	NELAP	LA
9774 - 2,4,4',6-Tetrabromodiphenylether (BDE-75)	EPA 1614A	10120704	NELAP	LA
9729 - 2,4,6-Tribromodiphenylether (BDE-30)	EPA 1614A	10120704	NELAP	LA
9706 - 2,4-Dibromodiphenylether (BDE-7)	EPA 1614A	10120704	NELAP	LA
9709 - 2,6-Dibromodiphenylether (BDE-10)	EPA 1614A	10120704	NELAP	LA
9700 - 2-Bromodiphenylether (BDE-1)	EPA 1614A	10120704	NELAP	LA
9865 - 3,3',4,4',5,5'-Hexabromodiphenylether (BDE-169)	EPA 1614A	10120704	NELAP	LA
9823 - 3,3',4,4',5-Pentabromodiphenylether (BDE-126)	EPA 1614A	10120704	NELAP	LA
9776 - 3,3',4,4'-Tetrabromodiphenylether (BDE-77)	EPA 1614A	10120704	NELAP	LA
9734 - 3,3',4-Tribromodiphenylether (BDE-35)	EPA 1614A	10120704	NELAP	LA
9712 - 3,4'-Dibromodiphenylether (BDE-13)	EPA 1614A	10120704	NELAP	LA
9736 - 3,4,4'-Tribromodiphenylether (BDE-37)	EPA 1614A	10120704	NELAP	LA
9711 - 3,4-Dibromodiphenylether (BDE-12)	EPA 1614A	10120704	NELAP	LA
9701 - 3-Bromodiphenylether (BDE-2)	EPA 1614A	10120704	NELAP	LA
9714 - 4,4'-Dibromodiphenylether (BDE-15)	EPA 1614A	10120704	NELAP	LA
5660 - 4-Bromophenyl phenyl ether	EPA 1614A	10120704	NELAP	LA
8902 - Coelution - Dibromodiphenyl ethers (BDE-8 + BDE-11)	EPA 1614A	10120704	NELAP	LA
9908 - Coelution - Pentabromodiphenyl ethers (BDE-119 + BDE-120)	EPA 1614A	10120704	NELAP	LA
9909 - Coelution - Tribromodiphenyl ethers (BDE-28 + BDE-33)	EPA 1614A	10120704	NELAP	LA
9905 - Decabromodiphenylether (BDE-209)	EPA 1614A	10120704	NELAP	LA
9105 - 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (BZ-209)	EPA 1668A	10129405	NELAP	LA
9095 - 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ-206)	EPA 1668A	10129405	NELAP	LA
9090 - 2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ-194)	EPA 1668A	10129405	NELAP	LA
9102 - 2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ-196)	EPA 1668A	10129405	NELAP	LA
9101 - 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ-207)	EPA 1668A	10129405	NELAP	LA
9103 - 2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ-195)	EPA 1668A	10129405	NELAP	LA
9065 - 2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ-170)	EPA 1668A	10129405	NELAP	LA
9104 - 2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ-197)	EPA 1668A	10129405	NELAP	LA
9106 - 2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ-171)	EPA 1668A	10129405	NELAP	LA
9020 - 2,2',3,3',4,4'-Hexachlorobiphenyl (BZ-128)	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9114 - 2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ-177)	EPA 1668A	10129405	NELAP	LA
9112 - 2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ-201)	EPA 1668A	10129405	NELAP	LA
9115 - 2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ-175)	EPA 1668A	10129405	NELAP	LA
9117 - 2,2',3,3',4,5'-Hexachlorobiphenyl (BZ-130)	EPA 1668A	10129405	NELAP	LA
9108 - 2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ-199)	EPA 1668A	10129405	NELAP	LA
9107 - 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ-208)	EPA 1668A	10129405	NELAP	LA
9109 - 2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ-198)	EPA 1668A	10129405	NELAP	LA
9110 - 2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ-172)	EPA 1668A	10129405	NELAP	LA
9116 - 2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ-174)	EPA 1668A	10129405	NELAP	LA
9111 - 2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ-200)	EPA 1668A	10129405	NELAP	LA
9113 - 2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ-173)	EPA 1668A	10129405	NELAP	LA
9118 - 2,2',3,3',4,5-Hexachlorobiphenyl (BZ-129)	EPA 1668A	10129405	NELAP	LA
9120 - 2,2',3,3',4,6'-Hexachlorobiphenyl (BZ-132)	EPA 1668A	10129405	NELAP	LA
9119 - 2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ-176)	EPA 1668A	10129405	NELAP	LA
9121 - 2,2',3,3',4,6-Hexachlorobiphenyl (BZ-131)	EPA 1668A	10129405	NELAP	LA
9122 - 2,2',3,3',4-Pentachlorobiphenyl (BZ-82)	EPA 1668A	10129405	NELAP	LA
9123 - 2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ-202)	EPA 1668A	10129405	NELAP	LA
9124 - 2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ-178)	EPA 1668A	10129405	NELAP	LA
9125 - 2,2',3,3',5,5'-Hexachlorobiphenyl (BZ-133)	EPA 1668A	10129405	NELAP	LA
9127 - 2,2',3,3',5,6'-Hexachlorobiphenyl (BZ-135)	EPA 1668A	10129405	NELAP	LA
9126 - 2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ-179)	EPA 1668A	10129405	NELAP	LA
9128 - 2,2',3,3',5,6-Hexachlorobiphenyl (BZ-134)	EPA 1668A	10129405	NELAP	LA
9129 - 2,2',3,3',5-Pentachlorobiphenyl (BZ-83)	EPA 1668A	10129405	NELAP	LA
9130 - 2,2',3,3',6,6'-Hexachlorobiphenyl (BZ-136)	EPA 1668A	10129405	NELAP	LA
9131 - 2,2',3,3',6-Pentachlorobiphenyl (BZ-84)	EPA 1668A	10129405	NELAP	LA
9132 - 2,2',3,3'-Tetrachlorobiphenyl (BZ-40)	EPA 1668A	10129405	NELAP	LA
9151 - 2,2',3,4',5',6-Hexachlorobiphenyl (BZ-149)	EPA 1668A	10129405	NELAP	LA
9154 - 2,2',3,4',5'-Pentachlorobiphenyl	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
(BZ-97)				
9080 - 2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ-187)	EPA 1668A	10129405	NELAP	LA
9144 - 2,2',3,4',5,5'-Hexachlorobiphenyl (BZ-146)	EPA 1668A	10129405	NELAP	LA
9147 - 2,2',3,4',5,6'-Hexachlorobiphenyl (BZ-148)	EPA 1668A	10129405	NELAP	LA
9146 - 2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ-188)	EPA 1668A	10129405	NELAP	LA
9149 - 2,2',3,4',5,6-Hexachlorobiphenyl (BZ-147)	EPA 1668A	10129405	NELAP	LA
9155 - 2,2',3,4',5-Pentachlorobiphenyl (BZ-90)	EPA 1668A	10129405	NELAP	LA
9159 - 2,2',3,4',6'-Pentachlorobiphenyl (BZ-98)	EPA 1668A	10129405	NELAP	LA
9157 - 2,2',3,4',6,6'-Hexachlorobiphenyl (BZ-150)	EPA 1668A	10129405	NELAP	LA
9160 - 2,2',3,4',6-Pentachlorobiphenyl (BZ-91)	EPA 1668A	10129405	NELAP	LA
9162 - 2,2',3,4'-Tetrachlorobiphenyl (BZ-42)	EPA 1668A	10129405	NELAP	LA
9075 - 2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ-183)	EPA 1668A	10129405	NELAP	LA
9025 - 2,2',3,4,4',5'-Hexachlorobiphenyl (BZ-138)	EPA 1668A	10129405	NELAP	LA
9133 - 2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ-203)	EPA 1668A	10129405	NELAP	LA
9134 - 2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ-180)	EPA 1668A	10129405	NELAP	LA
9136 - 2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ-182)	EPA 1668A	10129405	NELAP	LA
9135 - 2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ-204)	EPA 1668A	10129405	NELAP	LA
9137 - 2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ-181)	EPA 1668A	10129405	NELAP	LA
9138 - 2,2',3,4,4',5-Hexachlorobiphenyl (BZ-137)	EPA 1668A	10129405	NELAP	LA
9140 - 2,2',3,4,4',6'-Hexachlorobiphenyl (BZ-140)	EPA 1668A	10129405	NELAP	LA
9139 - 2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ-184)	EPA 1668A	10129405	NELAP	LA
9141 - 2,2',3,4,4',6-Hexachlorobiphenyl (BZ-139)	EPA 1668A	10129405	NELAP	LA
9142 - 2,2',3,4,4'-Pentachlorobiphenyl (BZ-85)	EPA 1668A	10129405	NELAP	LA
9150 - 2,2',3,4,5',6-Hexachlorobiphenyl (BZ-144)	EPA 1668A	10129405	NELAP	LA
8975 - 2,2',3,4,5'-Pentachlorobiphenyl (BZ-87)	EPA 1668A	10129405	NELAP	LA
9143 - 2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ-185)	EPA 1668A	10129405	NELAP	LA
9030 - 2,2',3,4,5,5'-Hexachlorobiphenyl (BZ-141)	EPA 1668A	10129405	NELAP	LA
9152 - 2,2',3,4,5,6'-Hexachlorobiphenyl (BZ-143)	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9145 - 2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ-186)	EPA 1668A	10129405	NELAP	LA
9148 - 2,2',3,4,5,6-Hexachlorobiphenyl (BZ-142)	EPA 1668A	10129405	NELAP	LA
9153 - 2,2',3,4,5-Pentachlorobiphenyl (BZ-86)	EPA 1668A	10129405	NELAP	LA
9161 - 2,2',3,4,6'-Pentachlorobiphenyl (BZ-89)	EPA 1668A	10129405	NELAP	LA
9156 - 2,2',3,4,6,6'-Hexachlorobiphenyl (BZ-145)	EPA 1668A	10129405	NELAP	LA
9158 - 2,2',3,4,6-Pentachlorobiphenyl (BZ-88)	EPA 1668A	10129405	NELAP	LA
9163 - 2,2',3,4-Tetrachlorobiphenyl (BZ-41)	EPA 1668A	10129405	NELAP	LA
9166 - 2,2',3,5',6-Pentachlorobiphenyl (BZ-95)	EPA 1668A	10129405	NELAP	LA
8945 - 2,2',3,5'-Tetrachlorobiphenyl (BZ-44)	EPA 1668A	10129405	NELAP	LA
9035 - 2,2',3,5,5',6-Hexachlorobiphenyl (BZ-151)	EPA 1668A	10129405	NELAP	LA
9164 - 2,2',3,5,5'-Pentachlorobiphenyl (BZ-92)	EPA 1668A	10129405	NELAP	LA
9167 - 2,2',3,5,6'-Pentachlorobiphenyl (BZ-94)	EPA 1668A	10129405	NELAP	LA
9165 - 2,2',3,5,6,6'-Hexachlorobiphenyl (BZ-152)	EPA 1668A	10129405	NELAP	LA
9168 - 2,2',3,5,6-Pentachlorobiphenyl (BZ-93)	EPA 1668A	10129405	NELAP	LA
9169 - 2,2',3,5-Tetrachlorobiphenyl (BZ-43)	EPA 1668A	10129405	NELAP	LA
9171 - 2,2',3,6'-Tetrachlorobiphenyl (BZ-46)	EPA 1668A	10129405	NELAP	LA
9170 - 2,2',3,6,6'-Pentachlorobiphenyl (BZ-96)	EPA 1668A	10129405	NELAP	LA
9172 - 2,2',3,6-Tetrachlorobiphenyl (BZ-45)	EPA 1668A	10129405	NELAP	LA
9173 - 2,2',3-Trichlorobiphenyl (BZ-16)	EPA 1668A	10129405	NELAP	LA
9040 - 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ-153)	EPA 1668A	10129405	NELAP	LA
9174 - 2,2',4,4',5,6'-Hexachlorobiphenyl (BZ-154)	EPA 1668A	10129405	NELAP	LA
9175 - 2,2',4,4',5-Pentachlorobiphenyl (BZ-99)	EPA 1668A	10129405	NELAP	LA
9176 - 2,2',4,4',6,6'-Hexachlorobiphenyl (BZ-155)	EPA 1668A	10129405	NELAP	LA
9177 - 2,2',4,4',6-Pentachlorobiphenyl (BZ-100)	EPA 1668A	10129405	NELAP	LA
9178 - 2,2',4,4'-Tetrachlorobiphenyl (BZ-47)	EPA 1668A	10129405	NELAP	LA
9179 - 2,2',4,5',6-Pentachlorobiphenyl (BZ-103)	EPA 1668A	10129405	NELAP	LA
8950 - 2,2',4,5'-Tetrachlorobiphenyl (BZ-49)	EPA 1668A	10129405	NELAP	LA
8980 - 2,2',4,5,5'-Pentachlorobiphenyl (BZ-101)	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9180 - 2,2',4,5,6'-Pentachlorobiphenyl (BZ-102)	EPA 1668A	10129405	NELAP	LA
9181 - 2,2',4,5-Tetrachlorobiphenyl (BZ-48)	EPA 1668A	10129405	NELAP	LA
9183 - 2,2',4,6'-Tetrachlorobiphenyl (BZ-51)	EPA 1668A	10129405	NELAP	LA
9182 - 2,2',4,6,6'-Pentachlorobiphenyl (BZ-104)	EPA 1668A	10129405	NELAP	LA
9184 - 2,2',4,6-Tetrachlorobiphenyl (BZ-50)	EPA 1668A	10129405	NELAP	LA
9185 - 2,2',4-Trichlorobiphenyl (BZ-17)	EPA 1668A	10129405	NELAP	LA
8955 - 2,2',5,5'-Tetrachlorobiphenyl (BZ-52)	EPA 1668A	10129405	NELAP	LA
9186 - 2,2',5,6'-Tetrachlorobiphenyl (BZ-53)	EPA 1668A	10129405	NELAP	LA
8930 - 2,2',5-Trichlorobiphenyl (BZ-18)	EPA 1668A	10129405	NELAP	LA
9187 - 2,2',6,6'-Tetrachlorobiphenyl (BZ-54)	EPA 1668A	10129405	NELAP	LA
9188 - 2,2',6-Trichlorobiphenyl (BZ-19)	EPA 1668A	10129405	NELAP	LA
9189 - 2,2'-Dichlorobiphenyl (BZ-4)	EPA 1668A	10129405	NELAP	LA
9224 - 2,3',4',5',6-Pentachlorobiphenyl (BZ-125)	EPA 1668A	10129405	NELAP	LA
9229 - 2,3',4',5'-Tetrachlorobiphenyl (BZ-76)	EPA 1668A	10129405	NELAP	LA
9222 - 2,3',4',5,5'-Pentachlorobiphenyl (BZ-124)	EPA 1668A	10129405	NELAP	LA
9230 - 2,3',4',5-Tetrachlorobiphenyl (BZ-70)	EPA 1668A	10129405	NELAP	LA
9237 - 2,3',4',6-Tetrachlorobiphenyl (BZ-71)	EPA 1668A	10129405	NELAP	LA
9239 - 2,3',4'-Trichlorobiphenyl (BZ-33)	EPA 1668A	10129405	NELAP	LA
9218 - 2,3',4,4',5',6-Hexachlorobiphenyl (BZ-168)	EPA 1668A	10129405	NELAP	LA
9000 - 2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	EPA 1668A	10129405	NELAP	LA
9011 - 2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	EPA 1668A	10129405	NELAP	LA
9055 - 2,3',4,4',5,5'-Hexachlorobiphenyl (BZ-167)	EPA 1668A	10129405	NELAP	LA
8995 - 2,3',4,4',5-Pentachlorobiphenyl (BZ-118)	EPA 1668A	10129405	NELAP	LA
9220 - 2,3',4,4',6-Pentachlorobiphenyl (BZ-119)	EPA 1668A	10129405	NELAP	LA
8960 - 2,3',4,4'-Tetrachlorobiphenyl (BZ-66)	EPA 1668A	10129405	NELAP	LA
9226 - 2,3',4,5',6-Pentachlorobiphenyl (BZ-121)	EPA 1668A	10129405	NELAP	LA
9231 - 2,3',4,5'-Tetrachlorobiphenyl (BZ-68)	EPA 1668A	10129405	NELAP	LA
9223 - 2,3',4,5,5'-Pentachlorobiphenyl (BZ-120)	EPA 1668A	10129405	NELAP	LA
9232 - 2,3',4,5-Tetrachlorobiphenyl (BZ-67)	EPA 1668A	10129405	NELAP	LA
9235 - 2,3',4,6-Tetrachlorobiphenyl (BZ-69)	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9240 - 2,3',4-Trichlorobiphenyl (BZ-25)	EPA 1668A	10129405	NELAP	LA
9244 - 2,3',5',6-Tetrachlorobiphenyl (BZ-73)	EPA 1668A	10129405	NELAP	LA
9246 - 2,3',5'-Trichlorobiphenyl (BZ-34)	EPA 1668A	10129405	NELAP	LA
9242 - 2,3',5,5'-Tetrachlorobiphenyl (BZ-72)	EPA 1668A	10129405	NELAP	LA
8935 - 2,3',5-Trichlorobiphenyl (BZ-26)	EPA 1668A	10129405	NELAP	LA
9248 - 2,3',6-Trichlorobiphenyl (BZ-27)	EPA 1668A	10129405	NELAP	LA
9249 - 2,3'-Dichlorobiphenyl (BZ-6)	EPA 1668A	10129405	NELAP	LA
9201 - 2,3,3',4',5',6-Hexachlorobiphenyl (BZ-164)	EPA 1668A	10129405	NELAP	LA
9202 - 2,3,3',4',5'-Pentachlorobiphenyl (BZ-122)	EPA 1668A	10129405	NELAP	LA
9195 - 2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ-193)	EPA 1668A	10129405	NELAP	LA
9197 - 2,3,3',4',5,5'-Hexachlorobiphenyl (BZ-162)	EPA 1668A	10129405	NELAP	LA
9199 - 2,3,3',4',5,6-Hexachlorobiphenyl (BZ-163)	EPA 1668A	10129405	NELAP	LA
9205 - 2,3,3',4',5-Pentachlorobiphenyl (BZ-107)	EPA 1668A	10129405	NELAP	LA
8990 - 2,3,3',4',6-Pentachlorobiphenyl (BZ-110)	EPA 1668A	10129405	NELAP	LA
9207 - 2,3,3',4'-Tetrachlorobiphenyl (BZ-56)	EPA 1668A	10129405	NELAP	LA
9192 - 2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ-191)	EPA 1668A	10129405	NELAP	LA
9045 - 2,3,3',4,4',5'-Hexachlorobiphenyl (BZ-157)	EPA 1668A	10129405	NELAP	LA
9190 - 2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ-205)	EPA 1668A	10129405	NELAP	LA
9085 - 2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ-189)	EPA 1668A	10129405	NELAP	LA
9191 - 2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ-190)	EPA 1668A	10129405	NELAP	LA
9050 - 2,3,3',4,4',5-Hexachlorobiphenyl (BZ-156)	EPA 1668A	10129405	NELAP	LA
9193 - 2,3,3',4,4',6-Hexachlorobiphenyl (BZ-158)	EPA 1668A	10129405	NELAP	LA
8985 - 2,3,3',4,4'-Pentachlorobiphenyl (BZ-105)	EPA 1668A	10129405	NELAP	LA
9200 - 2,3,3',4,5',6-Hexachlorobiphenyl (BZ-161)	EPA 1668A	10129405	NELAP	LA
9203 - 2,3,3',4,5'-Pentachlorobiphenyl (BZ-108)	EPA 1668A	10129405	NELAP	LA
9194 - 2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ-192)	EPA 1668A	10129405	NELAP	LA
9196 - 2,3,3',4,5,5'-Hexachlorobiphenyl (BZ-159)	EPA 1668A	10129405	NELAP	LA
9198 - 2,3,3',4,5,6-Hexachlorobiphenyl (BZ-160)	EPA 1668A	10129405	NELAP	LA
9204 - 2,3,3',4,5-Pentachlorobiphenyl (BZ-106)	EPA 1668A	10129405	NELAP	LA
9206 - 2,3,3',4,6-Pentachlorobiphenyl (BZ-109)	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9208 - 2,3,3',4-Tetrachlorobiphenyl (BZ-55)	EPA 1668A	10129405	NELAP	LA
9212 - 2,3,3',5',6-Pentachlorobiphenyl (BZ-113)	EPA 1668A	10129405	NELAP	LA
9213 - 2,3,3',5'-Tetrachlorobiphenyl (BZ-58)	EPA 1668A	10129405	NELAP	LA
9209 - 2,3,3',5,5',6-Hexachlorobiphenyl (BZ-165)	EPA 1668A	10129405	NELAP	LA
9210 - 2,3,3',5,5'-Pentachlorobiphenyl (BZ-111)	EPA 1668A	10129405	NELAP	LA
9211 - 2,3,3',5,6-Pentachlorobiphenyl (BZ-112)	EPA 1668A	10129405	NELAP	LA
9214 - 2,3,3',5-Tetrachlorobiphenyl (BZ-57)	EPA 1668A	10129405	NELAP	LA
9215 - 2,3,3',6-Tetrachlorobiphenyl (BZ-59)	EPA 1668A	10129405	NELAP	LA
9216 - 2,3,3'-Trichlorobiphenyl (BZ-20)	EPA 1668A	10129405	NELAP	LA
9227 - 2,3,4',5,6-Pentachlorobiphenyl (BZ-117)	EPA 1668A	10129405	NELAP	LA
9233 - 2,3,4',5-Tetrachlorobiphenyl (BZ-63)	EPA 1668A	10129405	NELAP	LA
9236 - 2,3,4',6-Tetrachlorobiphenyl (BZ-64)	EPA 1668A	10129405	NELAP	LA
9241 - 2,3,4'-Trichlorobiphenyl (BZ-22)	EPA 1668A	10129405	NELAP	LA
9217 - 2,3,4,4',5,6-Hexachlorobiphenyl (BZ-166)	EPA 1668A	10129405	NELAP	LA
9005 - 2,3,4,4',5-Pentachlorobiphenyl (BZ-114)	EPA 1668A	10129405	NELAP	LA
9219 - 2,3,4,4',6-Pentachlorobiphenyl (BZ-115)	EPA 1668A	10129405	NELAP	LA
9221 - 2,3,4,4'-Tetrachlorobiphenyl (BZ-60)	EPA 1668A	10129405	NELAP	LA
9225 - 2,3,4,5,6-Pentachlorobiphenyl (BZ-116)	EPA 1668A	10129405	NELAP	LA
9228 - 2,3,4,5-Tetrachlorobiphenyl (BZ-61)	EPA 1668A	10129405	NELAP	LA
9234 - 2,3,4,6-Tetrachlorobiphenyl (BZ-62)	EPA 1668A	10129405	NELAP	LA
9238 - 2,3,4-Trichlorobiphenyl (BZ-21)	EPA 1668A	10129405	NELAP	LA
9243 - 2,3,5,6-Tetrachlorobiphenyl (BZ-65)	EPA 1668A	10129405	NELAP	LA
9245 - 2,3,5-Trichlorobiphenyl (BZ-23)	EPA 1668A	10129405	NELAP	LA
9247 - 2,3,6-Trichlorobiphenyl (BZ-24)	EPA 1668A	10129405	NELAP	LA
8920 - 2,3-Dichlorobiphenyl (BZ-5)	EPA 1668A	10129405	NELAP	LA
8940 - 2,4',5-Trichlorobiphenyl (BZ-31)	EPA 1668A	10129405	NELAP	LA
9255 - 2,4',6-Trichlorobiphenyl (BZ-32)	EPA 1668A	10129405	NELAP	LA
9256 - 2,4'-Dichlorobiphenyl (BZ-8)	EPA 1668A	10129405	NELAP	LA
9250 - 2,4,4',5-Tetrachlorobiphenyl (BZ-74)	EPA 1668A	10129405	NELAP	LA
9251 - 2,4,4',6-Tetrachlorobiphenyl (BZ-75)	EPA 1668A	10129405	NELAP	LA
9252 - 2,4,4'-Trichlorobiphenyl (BZ-28)	EPA 1668A	10129405	NELAP	LA
9253 - 2,4,5-Trichlorobiphenyl (BZ-29)	EPA 1668A	10129405	NELAP	LA
9254 - 2,4,6-Trichlorobiphenyl (BZ-30)	EPA 1668A	10129405	NELAP	LA
9257 - 2,4-Dichlorobiphenyl (BZ-7)	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9258 - 2,5-Dichlorobiphenyl (BZ-9)	EPA 1668A	10129405	NELAP	LA
9259 - 2,6-Dichlorobiphenyl (BZ-10)	EPA 1668A	10129405	NELAP	LA
8915 - 2-Chlorobiphenyl (BZ-1)	EPA 1668A	10129405	NELAP	LA
9060 - 3,3',4,4',5,5'-Hexachlorobiphenyl (BZ-169)	EPA 1668A	10129405	NELAP	LA
9015 - 3,3',4,4',5-Pentachlorobiphenyl (BZ-126)	EPA 1668A	10129405	NELAP	LA
8965 - 3,3',4,4'-Tetrachlorobiphenyl (BZ-77)	EPA 1668A	10129405	NELAP	LA
9261 - 3,3',4,5'-Tetrachlorobiphenyl (BZ-79)	EPA 1668A	10129405	NELAP	LA
9260 - 3,3',4,5,5'-Pentachlorobiphenyl (BZ-127)	EPA 1668A	10129405	NELAP	LA
9262 - 3,3',4,5-Tetrachlorobiphenyl (BZ-78)	EPA 1668A	10129405	NELAP	LA
9263 - 3,3',4-Trichlorobiphenyl (BZ-35)	EPA 1668A	10129405	NELAP	LA
9264 - 3,3',5,5'-Tetrachlorobiphenyl (BZ-80)	EPA 1668A	10129405	NELAP	LA
9265 - 3,3',5-Trichlorobiphenyl (BZ-36)	EPA 1668A	10129405	NELAP	LA
8925 - 3,3'-Dichlorobiphenyl (BZ-11)	EPA 1668A	10129405	NELAP	LA
9268 - 3,4',5-Trichlorobiphenyl (BZ-39)	EPA 1668A	10129405	NELAP	LA
9269 - 3,4'-Dichlorobiphenyl (BZ-13)	EPA 1668A	10129405	NELAP	LA
8970 - 3,4,4',5-Tetrachlorobiphenyl (BZ-81)	EPA 1668A	10129405	NELAP	LA
9266 - 3,4,4'-Trichlorobiphenyl (BZ-37)	EPA 1668A	10129405	NELAP	LA
9267 - 3,4,5-Trichlorobiphenyl (BZ-38)	EPA 1668A	10129405	NELAP	LA
9270 - 3,4-Dichlorobiphenyl (BZ-12)	EPA 1668A	10129405	NELAP	LA
9271 - 3,5-Dichlorobiphenyl (BZ-14)	EPA 1668A	10129405	NELAP	LA
9272 - 3-Chlorobiphenyl (BZ-2)	EPA 1668A	10129405	NELAP	LA
9273 - 4,4'-Dichlorobiphenyl (BZ-15)	EPA 1668A	10129405	NELAP	LA
9274 - 4-Chlorobiphenyl (BZ-3)	EPA 1668A	10129405	NELAP	LA
1444 - Separatory Funnel Liquid-liquid extraction	EPA 3510C	10138202	NELAP	LA
9519 - 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290	10187209	NELAP	LA
9516 - 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290	10187209	NELAP	LA
9426 - 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	EPA 8290	10187209	NELAP	LA
9420 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	EPA 8290	10187209	NELAP	LA
9423 - 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	EPA 8290	10187209	NELAP	LA
9453 - 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	EPA 8290	10187209	NELAP	LA
9471 - 1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	EPA 8290	10187209	NELAP	LA
9456 - 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	EPA 8290	10187209	NELAP	LA
9474 - 1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	EPA 8290	10187209	NELAP	LA
9459 - 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	EPA 8290	10187209	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9477 - 1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	EPA 8290	10187209	NELAP	LA
9540 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	EPA 8290	10187209	NELAP	LA
9543 - 1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	EPA 8290	10187209	NELAP	LA
9480 - 2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 8290	10187209	NELAP	LA
9549 - 2,3,4,7,8-Pentachlorodibenzofuran	EPA 8290	10187209	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA 8290	10187209	NELAP	LA
9612 - 2,3,7,8-Tetrachlorodibenzofuran	EPA 8290	10187209	NELAP	LA
9438 - Total Hpcdd	EPA 8290	10187209	NELAP	LA
9444 - Total Hpcdf	EPA 8290	10187209	NELAP	LA
9468 - Total Hxcdd	EPA 8290	10187209	NELAP	LA
9483 - Total Hxcdf	EPA 8290	10187209	NELAP	LA
9555 - Total Pecdd	EPA 8290	10187209	NELAP	LA
9552 - Total Pecdf	EPA 8290	10187209	NELAP	LA
9609 - Total TCDD	EPA 8290	10187209	NELAP	LA
9615 - Total TCDF	EPA 8290	10187209	NELAP	LA
9519 - 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9516 - 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9426 - 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9420 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9423 - 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9453 - 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9471 - 1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9456 - 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9474 - 1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9459 - 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9477 - 1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9540 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9543 - 1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9480 - 2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 8290A, Rev.2007	10187403	NELAP	LA
9549 - 2,3,4,7,8-Pentachlorodibenzofuran	EPA 8290A, Rev.2007	10187403	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9612 - 2,3,7,8-Tetrachlorodibenzofuran	EPA 8290A, Rev.2007	10187403	NELAP	LA
9438 - Total Hpcdd	EPA 8290A, Rev.2007	10187403	NELAP	LA
9444 - Total Hpcdf	EPA 8290A, Rev.2007	10187403	NELAP	LA
9468 - Total Hxcdd	EPA 8290A, Rev.2007	10187403	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9483 - Total Hxcdf	EPA 8290A, Rev.2007	10187403	NELAP	LA
9555 - Total Pecdd	EPA 8290A, Rev.2007	10187403	NELAP	LA
9552 - Total Pecdf	EPA 8290A, Rev.2007	10187403	NELAP	LA
9609 - Total TCDD	EPA 8290A, Rev.2007	10187403	NELAP	LA
9615 - Total TCDF	EPA 8290A, Rev.2007	10187403	NELAP	LA
9105 - 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (BZ-209)	EPA 1668C	10262109	NELAP	LA
9095 - 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ-206)	EPA 1668C	10262109	NELAP	LA
9090 - 2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ-194)	EPA 1668C	10262109	NELAP	LA
9102 - 2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ-196)	EPA 1668C	10262109	NELAP	LA
9101 - 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ-207)	EPA 1668C	10262109	NELAP	LA
9103 - 2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ-195)	EPA 1668C	10262109	NELAP	LA
9065 - 2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ-170)	EPA 1668C	10262109	NELAP	LA
9104 - 2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ-197)	EPA 1668C	10262109	NELAP	LA
9106 - 2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ-171)	EPA 1668C	10262109	NELAP	LA
9020 - 2,2',3,3',4,4'-Hexachlorobiphenyl (BZ-128)	EPA 1668C	10262109	NELAP	LA
9114 - 2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ-177)	EPA 1668C	10262109	NELAP	LA
9112 - 2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ-201)	EPA 1668C	10262109	NELAP	LA
9115 - 2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ-175)	EPA 1668C	10262109	NELAP	LA
9117 - 2,2',3,3',4,5'-Hexachlorobiphenyl (BZ-130)	EPA 1668C	10262109	NELAP	LA
9108 - 2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ-199)	EPA 1668C	10262109	NELAP	LA
9107 - 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ-208)	EPA 1668C	10262109	NELAP	LA
9109 - 2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ-198)	EPA 1668C	10262109	NELAP	LA
9110 - 2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ-172)	EPA 1668C	10262109	NELAP	LA
9116 - 2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ-174)	EPA 1668C	10262109	NELAP	LA
9111 - 2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ-200)	EPA 1668C	10262109	NELAP	LA
9113 - 2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ-173)	EPA 1668C	10262109	NELAP	LA
9118 - 2,2',3,3',4,5-Hexachlorobiphenyl (BZ-129)	EPA 1668C	10262109	NELAP	LA
9120 - 2,2',3,3',4,6'-Hexachlorobiphenyl (BZ-132)	EPA 1668C	10262109	NELAP	LA
9119 - 2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ-176)	EPA 1668C	10262109	NELAP	LA
9121 - 2,2',3,3',4,6-Hexachlorobiphenyl (BZ-131)	EPA 1668C	10262109	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9122 - 2,2',3,3',4-Pentachlorobiphenyl (BZ-82)	EPA 1668C	10262109	NELAP	LA
9123 - 2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ-202)	EPA 1668C	10262109	NELAP	LA
9124 - 2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ-178)	EPA 1668C	10262109	NELAP	LA
9125 - 2,2',3,3',5,5'-Hexachlorobiphenyl (BZ-133)	EPA 1668C	10262109	NELAP	LA
9127 - 2,2',3,3',5,6'-Hexachlorobiphenyl (BZ-135)	EPA 1668C	10262109	NELAP	LA
9126 - 2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ-179)	EPA 1668C	10262109	NELAP	LA
9128 - 2,2',3,3',5,6-Hexachlorobiphenyl (BZ-134)	EPA 1668C	10262109	NELAP	LA
9129 - 2,2',3,3',5-Pentachlorobiphenyl (BZ-83)	EPA 1668C	10262109	NELAP	LA
9130 - 2,2',3,3',6,6'-Hexachlorobiphenyl (BZ-136)	EPA 1668C	10262109	NELAP	LA
9131 - 2,2',3,3',6-Pentachlorobiphenyl (BZ-84)	EPA 1668C	10262109	NELAP	LA
9132 - 2,2',3,3'-Tetrachlorobiphenyl (BZ-40)	EPA 1668C	10262109	NELAP	LA
9151 - 2,2',3,4',5',6-Hexachlorobiphenyl (BZ-149)	EPA 1668C	10262109	NELAP	LA
9154 - 2,2',3,4',5'-Pentachlorobiphenyl (BZ-97)	EPA 1668C	10262109	NELAP	LA
9080 - 2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ-187)	EPA 1668C	10262109	NELAP	LA
9144 - 2,2',3,4',5,5'-Hexachlorobiphenyl (BZ-146)	EPA 1668C	10262109	NELAP	LA
9147 - 2,2',3,4',5,6'-Hexachlorobiphenyl (BZ-148)	EPA 1668C	10262109	NELAP	LA
9146 - 2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ-188)	EPA 1668C	10262109	NELAP	LA
9149 - 2,2',3,4',5,6-Hexachlorobiphenyl (BZ-147)	EPA 1668C	10262109	NELAP	LA
9155 - 2,2',3,4',5-Pentachlorobiphenyl (BZ-90)	EPA 1668C	10262109	NELAP	LA
9159 - 2,2',3,4',6'-Pentachlorobiphenyl (BZ-98)	EPA 1668C	10262109	NELAP	LA
9157 - 2,2',3,4',6,6'-Hexachlorobiphenyl (BZ-150)	EPA 1668C	10262109	NELAP	LA
9160 - 2,2',3,4',6-Pentachlorobiphenyl (BZ-91)	EPA 1668C	10262109	NELAP	LA
9162 - 2,2',3,4'-Tetrachlorobiphenyl (BZ-42)	EPA 1668C	10262109	NELAP	LA
9075 - 2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ-183)	EPA 1668C	10262109	NELAP	LA
9025 - 2,2',3,4,4',5'-Hexachlorobiphenyl (BZ-138)	EPA 1668C	10262109	NELAP	LA
9133 - 2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ-203)	EPA 1668C	10262109	NELAP	LA
9134 - 2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ-180)	EPA 1668C	10262109	NELAP	LA
9136 - 2,2',3,4,4',5,6'-Heptachlorobiphenyl	EPA 1668C	10262109	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
(BZ-182)				
9135 - 2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ-204)	EPA 1668C	10262109	NELAP	LA
9137 - 2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ-181)	EPA 1668C	10262109	NELAP	LA
9138 - 2,2',3,4,4',5-Hexachlorobiphenyl (BZ-137)	EPA 1668C	10262109	NELAP	LA
9140 - 2,2',3,4,4',6'-Hexachlorobiphenyl (BZ-140)	EPA 1668C	10262109	NELAP	LA
9139 - 2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ-184)	EPA 1668C	10262109	NELAP	LA
9141 - 2,2',3,4,4',6-Hexachlorobiphenyl (BZ-139)	EPA 1668C	10262109	NELAP	LA
9142 - 2,2',3,4,4'-Pentachlorobiphenyl (BZ-85)	EPA 1668C	10262109	NELAP	LA
9150 - 2,2',3,4,5',6-Hexachlorobiphenyl (BZ-144)	EPA 1668C	10262109	NELAP	LA
8975 - 2,2',3,4,5'-Pentachlorobiphenyl (BZ-87)	EPA 1668C	10262109	NELAP	LA
9143 - 2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ-185)	EPA 1668C	10262109	NELAP	LA
9030 - 2,2',3,4,5,5'-Hexachlorobiphenyl (BZ-141)	EPA 1668C	10262109	NELAP	LA
9152 - 2,2',3,4,5,6'-Hexachlorobiphenyl (BZ-143)	EPA 1668C	10262109	NELAP	LA
9145 - 2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ-186)	EPA 1668C	10262109	NELAP	LA
9148 - 2,2',3,4,5,6-Hexachlorobiphenyl (BZ-142)	EPA 1668C	10262109	NELAP	LA
9153 - 2,2',3,4,5-Pentachlorobiphenyl (BZ-86)	EPA 1668C	10262109	NELAP	LA
9161 - 2,2',3,4,6'-Pentachlorobiphenyl (BZ-89)	EPA 1668C	10262109	NELAP	LA
9156 - 2,2',3,4,6,6'-Hexachlorobiphenyl (BZ-145)	EPA 1668C	10262109	NELAP	LA
9158 - 2,2',3,4,6-Pentachlorobiphenyl (BZ-88)	EPA 1668C	10262109	NELAP	LA
9163 - 2,2',3,4-Tetrachlorobiphenyl (BZ-41)	EPA 1668C	10262109	NELAP	LA
9166 - 2,2',3,5',6-Pentachlorobiphenyl (BZ-95)	EPA 1668C	10262109	NELAP	LA
8945 - 2,2',3,5'-Tetrachlorobiphenyl (BZ-44)	EPA 1668C	10262109	NELAP	LA
9035 - 2,2',3,5,5',6-Hexachlorobiphenyl (BZ-151)	EPA 1668C	10262109	NELAP	LA
9164 - 2,2',3,5,5'-Pentachlorobiphenyl (BZ-92)	EPA 1668C	10262109	NELAP	LA
9167 - 2,2',3,5,6'-Pentachlorobiphenyl (BZ-94)	EPA 1668C	10262109	NELAP	LA
9165 - 2,2',3,5,6,6'-Hexachlorobiphenyl (BZ-152)	EPA 1668C	10262109	NELAP	LA
9168 - 2,2',3,5,6-Pentachlorobiphenyl (BZ-93)	EPA 1668C	10262109	NELAP	LA
9169 - 2,2',3,5-Tetrachlorobiphenyl (BZ-43)	EPA 1668C	10262109	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9171 - 2,2',3,6'-Tetrachlorobiphenyl (BZ-46)	EPA 1668C	10262109	NELAP	LA
9170 - 2,2',3,6,6'-Pentachlorobiphenyl (BZ-96)	EPA 1668C	10262109	NELAP	LA
9172 - 2,2',3,6-Tetrachlorobiphenyl (BZ-45)	EPA 1668C	10262109	NELAP	LA
9173 - 2,2',3-Trichlorobiphenyl (BZ-16)	EPA 1668C	10262109	NELAP	LA
9040 - 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ-153)	EPA 1668C	10262109	NELAP	LA
9174 - 2,2',4,4',5,6'-Hexachlorobiphenyl (BZ-154)	EPA 1668C	10262109	NELAP	LA
9175 - 2,2',4,4',5-Pentachlorobiphenyl (BZ-99)	EPA 1668C	10262109	NELAP	LA
9176 - 2,2',4,4',6,6'-Hexachlorobiphenyl (BZ-155)	EPA 1668C	10262109	NELAP	LA
9177 - 2,2',4,4',6-Pentachlorobiphenyl (BZ-100)	EPA 1668C	10262109	NELAP	LA
9178 - 2,2',4,4'-Tetrachlorobiphenyl (BZ-47)	EPA 1668C	10262109	NELAP	LA
9179 - 2,2',4,5',6-Pentachlorobiphenyl (BZ-103)	EPA 1668C	10262109	NELAP	LA
8950 - 2,2',4,5'-Tetrachlorobiphenyl (BZ-49)	EPA 1668C	10262109	NELAP	LA
8980 - 2,2',4,5,5'-Pentachlorobiphenyl (BZ-101)	EPA 1668C	10262109	NELAP	LA
9180 - 2,2',4,5,6'-Pentachlorobiphenyl (BZ-102)	EPA 1668C	10262109	NELAP	LA
9181 - 2,2',4,5-Tetrachlorobiphenyl (BZ-48)	EPA 1668C	10262109	NELAP	LA
9183 - 2,2',4,6'-Tetrachlorobiphenyl (BZ-51)	EPA 1668C	10262109	NELAP	LA
9182 - 2,2',4,6,6'-Pentachlorobiphenyl (BZ-104)	EPA 1668C	10262109	NELAP	LA
9184 - 2,2',4,6-Tetrachlorobiphenyl (BZ-50)	EPA 1668C	10262109	NELAP	LA
9185 - 2,2',4-Trichlorobiphenyl (BZ-17)	EPA 1668C	10262109	NELAP	LA
8955 - 2,2',5,5'-Tetrachlorobiphenyl (BZ-52)	EPA 1668C	10262109	NELAP	LA
9186 - 2,2',5,6'-Tetrachlorobiphenyl (BZ-53)	EPA 1668C	10262109	NELAP	LA
8930 - 2,2',5-Trichlorobiphenyl (BZ-18)	EPA 1668C	10262109	NELAP	LA
9187 - 2,2',6,6'-Tetrachlorobiphenyl (BZ-54)	EPA 1668C	10262109	NELAP	LA
9188 - 2,2',6-Trichlorobiphenyl (BZ-19)	EPA 1668C	10262109	NELAP	LA
9189 - 2,2'-Dichlorobiphenyl (BZ-4)	EPA 1668C	10262109	NELAP	LA
9224 - 2,3',4',5',6-Pentachlorobiphenyl (BZ-125)	EPA 1668C	10262109	NELAP	LA
9229 - 2,3',4',5'-Tetrachlorobiphenyl (BZ-76)	EPA 1668C	10262109	NELAP	LA
9222 - 2,3',4',5,5'-Pentachlorobiphenyl (BZ-124)	EPA 1668C	10262109	NELAP	LA
9230 - 2,3',4',5-Tetrachlorobiphenyl (BZ-70)	EPA 1668C	10262109	NELAP	LA
9237 - 2,3',4',6-Tetrachlorobiphenyl (BZ-71)	EPA 1668C	10262109	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9239 - 2,3',4'-Trichlorobiphenyl (BZ-33)	EPA 1668C	10262109	NELAP	LA
9218 - 2,3',4,4',5',6-Hexachlorobiphenyl (BZ-168)	EPA 1668C	10262109	NELAP	LA
9011 - 2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	EPA 1668C	10262109	NELAP	LA
9000 - 2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	EPA 1668C	10262109	NELAP	LA
9055 - 2,3',4,4',5,5'-Hexachlorobiphenyl (BZ-167)	EPA 1668C	10262109	NELAP	LA
8995 - 2,3',4,4',5-Pentachlorobiphenyl (BZ-118)	EPA 1668C	10262109	NELAP	LA
9220 - 2,3',4,4',6-Pentachlorobiphenyl (BZ-119)	EPA 1668C	10262109	NELAP	LA
8960 - 2,3',4,4'-Tetrachlorobiphenyl (BZ-66)	EPA 1668C	10262109	NELAP	LA
9226 - 2,3',4,5',6-Pentachlorobiphenyl (BZ-121)	EPA 1668C	10262109	NELAP	LA
9231 - 2,3',4,5'-Tetrachlorobiphenyl (BZ-68)	EPA 1668C	10262109	NELAP	LA
9223 - 2,3',4,5,5'-Pentachlorobiphenyl (BZ-120)	EPA 1668C	10262109	NELAP	LA
9232 - 2,3',4,5-Tetrachlorobiphenyl (BZ-67)	EPA 1668C	10262109	NELAP	LA
9235 - 2,3',4,6-Tetrachlorobiphenyl (BZ-69)	EPA 1668C	10262109	NELAP	LA
9240 - 2,3',4-Trichlorobiphenyl (BZ-25)	EPA 1668C	10262109	NELAP	LA
9244 - 2,3',5',6-Tetrachlorobiphenyl (BZ-73)	EPA 1668C	10262109	NELAP	LA
9246 - 2,3',5'-Trichlorobiphenyl (BZ-34)	EPA 1668C	10262109	NELAP	LA
9242 - 2,3',5,5'-Tetrachlorobiphenyl (BZ-72)	EPA 1668C	10262109	NELAP	LA
8935 - 2,3',5-Trichlorobiphenyl (BZ-26)	EPA 1668C	10262109	NELAP	LA
9248 - 2,3',6-Trichlorobiphenyl (BZ-27)	EPA 1668C	10262109	NELAP	LA
9249 - 2,3'-Dichlorobiphenyl (BZ-6)	EPA 1668C	10262109	NELAP	LA
9201 - 2,3,3',4',5',6-Hexachlorobiphenyl (BZ-164)	EPA 1668C	10262109	NELAP	LA
9202 - 2,3,3',4',5'-Pentachlorobiphenyl (BZ-122)	EPA 1668C	10262109	NELAP	LA
9195 - 2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ-193)	EPA 1668C	10262109	NELAP	LA
9197 - 2,3,3',4',5,5'-Hexachlorobiphenyl (BZ-162)	EPA 1668C	10262109	NELAP	LA
9199 - 2,3,3',4',5,6-Hexachlorobiphenyl (BZ-163)	EPA 1668C	10262109	NELAP	LA
9205 - 2,3,3',4',5-Pentachlorobiphenyl (BZ-107)	EPA 1668C	10262109	NELAP	LA
8990 - 2,3,3',4',6-Pentachlorobiphenyl (BZ-110)	EPA 1668C	10262109	NELAP	LA
9207 - 2,3,3',4'-Tetrachlorobiphenyl (BZ-56)	EPA 1668C	10262109	NELAP	LA
9192 - 2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ-191)	EPA 1668C	10262109	NELAP	LA
9045 - 2,3,3',4,4',5'-Hexachlorobiphenyl (BZ-157)	EPA 1668C	10262109	NELAP	LA
9190 - 2,3,3',4,4',5,5',6-Octachlorobiphenyl	EPA 1668C	10262109	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
(BZ-205)				
9085 - 2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ-189)	EPA 1668C	10262109	NELAP	LA
9191 - 2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ-190)	EPA 1668C	10262109	NELAP	LA
9050 - 2,3,3',4,4',5-Hexachlorobiphenyl (BZ-156)	EPA 1668C	10262109	NELAP	LA
9193 - 2,3,3',4,4',6-Hexachlorobiphenyl (BZ-158)	EPA 1668C	10262109	NELAP	LA
8985 - 2,3,3',4,4'-Pentachlorobiphenyl (BZ-105)	EPA 1668C	10262109	NELAP	LA
9200 - 2,3,3',4,5',6-Hexachlorobiphenyl (BZ-161)	EPA 1668C	10262109	NELAP	LA
9203 - 2,3,3',4,5'-Pentachlorobiphenyl (BZ-108)	EPA 1668C	10262109	NELAP	LA
9194 - 2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ-192)	EPA 1668C	10262109	NELAP	LA
9196 - 2,3,3',4,5,5'-Hexachlorobiphenyl (BZ-159)	EPA 1668C	10262109	NELAP	LA
9198 - 2,3,3',4,5,6-Hexachlorobiphenyl (BZ-160)	EPA 1668C	10262109	NELAP	LA
9204 - 2,3,3',4,5-Pentachlorobiphenyl (BZ-106)	EPA 1668C	10262109	NELAP	LA
9206 - 2,3,3',4,6-Pentachlorobiphenyl (BZ-109)	EPA 1668C	10262109	NELAP	LA
9208 - 2,3,3',4-Tetrachlorobiphenyl (BZ-55)	EPA 1668C	10262109	NELAP	LA
9212 - 2,3,3',5',6-Pentachlorobiphenyl (BZ-113)	EPA 1668C	10262109	NELAP	LA
9213 - 2,3,3',5'-Tetrachlorobiphenyl (BZ-58)	EPA 1668C	10262109	NELAP	LA
9209 - 2,3,3',5,5',6-Hexachlorobiphenyl (BZ-165)	EPA 1668C	10262109	NELAP	LA
9210 - 2,3,3',5,5'-Pentachlorobiphenyl (BZ-111)	EPA 1668C	10262109	NELAP	LA
9211 - 2,3,3',5,6-Pentachlorobiphenyl (BZ-112)	EPA 1668C	10262109	NELAP	LA
9214 - 2,3,3',5-Tetrachlorobiphenyl (BZ-57)	EPA 1668C	10262109	NELAP	LA
9215 - 2,3,3',6-Tetrachlorobiphenyl (BZ-59)	EPA 1668C	10262109	NELAP	LA
9216 - 2,3,3'-Trichlorobiphenyl (BZ-20)	EPA 1668C	10262109	NELAP	LA
9227 - 2,3,4',5,6-Pentachlorobiphenyl (BZ-117)	EPA 1668C	10262109	NELAP	LA
9233 - 2,3,4',5-Tetrachlorobiphenyl (BZ-63)	EPA 1668C	10262109	NELAP	LA
9236 - 2,3,4',6-Tetrachlorobiphenyl (BZ-64)	EPA 1668C	10262109	NELAP	LA
9241 - 2,3,4'-Trichlorobiphenyl (BZ-22)	EPA 1668C	10262109	NELAP	LA
9217 - 2,3,4,4',5,6-Hexachlorobiphenyl (BZ-166)	EPA 1668C	10262109	NELAP	LA
9005 - 2,3,4,4',5-Pentachlorobiphenyl (BZ-114)	EPA 1668C	10262109	NELAP	LA
9219 - 2,3,4,4',6-Pentachlorobiphenyl (BZ-115)	EPA 1668C	10262109	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9221 - 2,3,4,4'-Tetrachlorobiphenyl (BZ-60)	EPA 1668C	10262109	NELAP	LA
9225 - 2,3,4,5,6-Pentachlorobiphenyl (BZ-116)	EPA 1668C	10262109	NELAP	LA
9228 - 2,3,4,5-Tetrachlorobiphenyl (BZ-61)	EPA 1668C	10262109	NELAP	LA
9234 - 2,3,4,6-Tetrachlorobiphenyl (BZ-62)	EPA 1668C	10262109	NELAP	LA
9238 - 2,3,4-Trichlorobiphenyl (BZ-21)	EPA 1668C	10262109	NELAP	LA
9243 - 2,3,5,6-Tetrachlorobiphenyl (BZ-65)	EPA 1668C	10262109	NELAP	LA
9245 - 2,3,5-Trichlorobiphenyl (BZ-23)	EPA 1668C	10262109	NELAP	LA
9247 - 2,3,6-Trichlorobiphenyl (BZ-24)	EPA 1668C	10262109	NELAP	LA
8920 - 2,3-Dichlorobiphenyl (BZ-5)	EPA 1668C	10262109	NELAP	LA
8940 - 2,4',5-Trichlorobiphenyl (BZ-31)	EPA 1668C	10262109	NELAP	LA
9255 - 2,4',6-Trichlorobiphenyl (BZ-32)	EPA 1668C	10262109	NELAP	LA
9256 - 2,4'-Dichlorobiphenyl (BZ-8)	EPA 1668C	10262109	NELAP	LA
9250 - 2,4,4',5-Tetrachlorobiphenyl (BZ-74)	EPA 1668C	10262109	NELAP	LA
9251 - 2,4,4',6-Tetrachlorobiphenyl (BZ-75)	EPA 1668C	10262109	NELAP	LA
9252 - 2,4,4'-Trichlorobiphenyl (BZ-28)	EPA 1668C	10262109	NELAP	LA
9253 - 2,4,5-Trichlorobiphenyl (BZ-29)	EPA 1668C	10262109	NELAP	LA
9254 - 2,4,6-Trichlorobiphenyl (BZ-30)	EPA 1668C	10262109	NELAP	LA
9257 - 2,4-Dichlorobiphenyl (BZ-7)	EPA 1668C	10262109	NELAP	LA
9258 - 2,5-Dichlorobiphenyl (BZ-9)	EPA 1668C	10262109	NELAP	LA
9259 - 2,6-Dichlorobiphenyl (BZ-10)	EPA 1668C	10262109	NELAP	LA
8915 - 2-Chlorobiphenyl (BZ-1)	EPA 1668C	10262109	NELAP	LA
9060 - 3,3',4,4',5,5'-Hexachlorobiphenyl (BZ-169)	EPA 1668C	10262109	NELAP	LA
9015 - 3,3',4,4',5-Pentachlorobiphenyl (BZ-126)	EPA 1668C	10262109	NELAP	LA
8965 - 3,3',4,4'-Tetrachlorobiphenyl (BZ-77)	EPA 1668C	10262109	NELAP	LA
9261 - 3,3',4,5'-Tetrachlorobiphenyl (BZ-79)	EPA 1668C	10262109	NELAP	LA
9260 - 3,3',4,5,5'-Pentachlorobiphenyl (BZ-127)	EPA 1668C	10262109	NELAP	LA
9262 - 3,3',4,5-Tetrachlorobiphenyl (BZ-78)	EPA 1668C	10262109	NELAP	LA
9263 - 3,3',4-Trichlorobiphenyl (BZ-35)	EPA 1668C	10262109	NELAP	LA
9264 - 3,3',5,5'-Tetrachlorobiphenyl (BZ-80)	EPA 1668C	10262109	NELAP	LA
9265 - 3,3',5-Trichlorobiphenyl (BZ-36)	EPA 1668C	10262109	NELAP	LA
8925 - 3,3'-Dichlorobiphenyl (BZ-11)	EPA 1668C	10262109	NELAP	LA
9268 - 3,4',5-Trichlorobiphenyl (BZ-39)	EPA 1668C	10262109	NELAP	LA
9269 - 3,4'-Dichlorobiphenyl (BZ-13)	EPA 1668C	10262109	NELAP	LA
8970 - 3,4,4',5-Tetrachlorobiphenyl (BZ-81)	EPA 1668C	10262109	NELAP	LA
9266 - 3,4,4'-Trichlorobiphenyl (BZ-37)	EPA 1668C	10262109	NELAP	LA
9267 - 3,4,5-Trichlorobiphenyl (BZ-38)	EPA 1668C	10262109	NELAP	LA
9270 - 3,4-Dichlorobiphenyl (BZ-12)	EPA 1668C	10262109	NELAP	LA
9271 - 3,5-Dichlorobiphenyl (BZ-14)	EPA 1668C	10262109	NELAP	LA
9272 - 3-Chlorobiphenyl (BZ-2)	EPA 1668C	10262109	NELAP	LA
9273 - 4,4'-Dichlorobiphenyl (BZ-15)	EPA 1668C	10262109	NELAP	LA

Non Potable Water

Analyte	Method Name	Method Code	Type	AB
9274 - 4-Chlorobiphenyl (BZ-3)	EPA 1668C	10262109	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
9519 - 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 1613B	10120602	NELAP	LA
9516 - 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 1613B	10120602	NELAP	LA
9426 - 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	EPA 1613B	10120602	NELAP	LA
9420 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	EPA 1613B	10120602	NELAP	LA
9423 - 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	EPA 1613B	10120602	NELAP	LA
9453 - 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	EPA 1613B	10120602	NELAP	LA
9471 - 1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	EPA 1613B	10120602	NELAP	LA
9456 - 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	EPA 1613B	10120602	NELAP	LA
9474 - 1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	EPA 1613B	10120602	NELAP	LA
9459 - 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	EPA 1613B	10120602	NELAP	LA
9477 - 1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	EPA 1613B	10120602	NELAP	LA
9540 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	EPA 1613B	10120602	NELAP	LA
9543 - 1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	EPA 1613B	10120602	NELAP	LA
9480 - 2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 1613B	10120602	NELAP	LA
9549 - 2,3,4,7,8-Pentachlorodibenzofuran	EPA 1613B	10120602	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA 1613B	10120602	NELAP	LA
9612 - 2,3,7,8-Tetrachlorodibenzofuran	EPA 1613B	10120602	NELAP	LA
9438 - Total Hpcdd	EPA 1613B	10120602	NELAP	LA
9444 - Total Hpcdf	EPA 1613B	10120602	NELAP	LA
9468 - Total Hxcdd	EPA 1613B	10120602	NELAP	LA
9483 - Total Hxcdf	EPA 1613B	10120602	NELAP	LA
9555 - Total Pecdd	EPA 1613B	10120602	NELAP	LA
9552 - Total Pecdf	EPA 1613B	10120602	NELAP	LA
9609 - Total TCDD	EPA 1613B	10120602	NELAP	LA
9615 - Total TCDF	EPA 1613B	10120602	NELAP	LA
9873 - 2,2',3,3',4',5,6-Heptabromodiphenylether (BDE-177)	EPA 1614A	10120704	NELAP	LA
9902 - 2,2',3,3',4,4',5,5',6-Nonabromodiphenylether (BDE-206)	EPA 1614A	10120704	NELAP	LA
9892 - 2,2',3,3',4,4',5,6'-Octabromodiphenylether (BDE-196)	EPA 1614A	10120704	NELAP	LA
9903 - 2,2',3,3',4,4',5,6,6'-Nonabromodiphenylether (BDE-207)	EPA 1614A	10120704	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
9893 - 2,2',3,3',4,4',6,6'-Octabromodiphenylether (BDE-197)	EPA 1614A	10120704	NELAP	LA
9867 - 2,2',3,3',4,4',6-Heptabromodiphenylether (BDE-171)	EPA 1614A	10120704	NELAP	LA
9897 - 2,2',3,3',4,5',6,6'-Octabromodiphenylether (BDE-201)	EPA 1614A	10120704	NELAP	LA
9904 - 2,2',3,3',4,5,5',6,6'-Nonabromodiphenylether (BDE-208)	EPA 1614A	10120704	NELAP	LA
9896 - 2,2',3,3',4,5,6,6'-Octabromodiphenylether (BDE-200)	EPA 1614A	10120704	NELAP	LA
9872 - 2,2',3,3',4,6,6'-Heptabromodiphenylether (BDE-176)	EPA 1614A	10120704	NELAP	LA
9789 - 2,2',3,4',5-Pentabromodiphenylether (BDE-90)	EPA 1614A	10120704	NELAP	LA
9879 - 2,2',3,4,4',5',6-Heptabromodiphenylether (BDE-183)	EPA 1614A	10120704	NELAP	LA
9835 - 2,2',3,4,4',5'-Hexabromodiphenylether (BDE-138)	EPA 1614A	10120704	NELAP	LA
9899 - 2,2',3,4,4',5,5',6-Octabromodiphenylether (BDE-203)	EPA 1614A	10120704	NELAP	LA
9876 - 2,2',3,4,4',5,5'-Heptabromodiphenylether (BDE-180)	EPA 1614A	10120704	NELAP	LA
9878 - 2,2',3,4,4',5,6'-Heptabromodiphenylether (BDE-182)	EPA 1614A	10120704	NELAP	LA
9900 - 2,2',3,4,4',5,6,6'-Octabromodiphenylether (BDE-204)	EPA 1614A	10120704	NELAP	LA
9877 - 2,2',3,4,4',5,6-Heptabromodiphenylether (BDE-181)	EPA 1614A	10120704	NELAP	LA
9837 - 2,2',3,4,4',6'-Hexabromodiphenylether (BDE-140)	EPA 1614A	10120704	NELAP	LA
9880 - 2,2',3,4,4',6,6'-Heptabromodiphenylether (BDE-184)	EPA 1614A	10120704	NELAP	LA
9836 - 2,2',3,4,4',6-Hexabromodiphenylether (BDE-139)	EPA 1614A	10120704	NELAP	LA
9784 - 2,2',3,4,4'-Pentabromodiphenylether (BDE-85)	EPA 1614A	10120704	NELAP	LA
9850 - 2,2',4,4',5',6-Hexabromodiphenylether (BDE-154)	EPA 1614A	10120704	NELAP	LA
9569 - 2,2',4,4',5,5'-Hexabromodiphenyl ether (BDE-153)	EPA 1614A	10120704	NELAP	LA
9571 - 2,2',4,4',5-Pentabromodiphenyl ether (BDE-99)	EPA 1614A	10120704	NELAP	LA
9851 - 2,2',4,4',6,6'-Hexabromodiphenylether (BDE-155)	EPA 1614A	10120704	NELAP	LA
9572 - 2,2',4,4',6-Pentabromodiphenyl ether (BDE-100)	EPA 1614A	10120704	NELAP	LA
9773 - 2,2',4,4'-Tetrabromodiphenyl ether (BDE-47)	EPA 1614A	10120704	NELAP	LA
9747 - 2,2',4,5'-Tetrabromodiphenylether (BDE-49)	EPA 1614A	10120704	NELAP	LA
9716 - 2,2',4-Tribromodiphenylether (BDE-17)	EPA 1614A	10120704	NELAP	LA
9749 - 2,2'4,6'-Tetrabromodiphenylether (BDE-51)	EPA 1614A	10120704	NELAP	LA
9769 - 2,3',4',6-Tetrabromodiphenylether	EPA 1614A	10120704	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
(BDE-71)				
9815 - 2,3',4,4',5-Pentabromodiphenylether (BDE-118)	EPA 1614A	10120704	NELAP	LA
9764 - 2,3',4,4'-Tetrabromodiphenylether (BDE-66)	EPA 1614A	10120704	NELAP	LA
9724 - 2,3',4-Tribromodiphenylether (BDE-25)	EPA 1614A	10120704	NELAP	LA
9887 - 2,3,3',4,4',5',6-Heptabromodiphenylether (BDE-191)	EPA 1614A	10120704	NELAP	LA
9901 - 2,3,3',4,4',5,5',6-Octabromodiphenylether (BDE-205)	EPA 1614A	10120704	NELAP	LA
9886 - 2,3,3',4,4',5,6-Heptabromodiphenylether (BDE-190)	EPA 1614A	10120704	NELAP	LA
9852 - 2,3,3',4,4,'5-Hexabromodiphenylether (BDE-156)	EPA 1614A	10120704	NELAP	LA
9862 - 2,3 ,4,4',5,6-Hexabromodiphenylether (BDE-166)	EPA 1614A	10120704	NELAP	LA
9813 - 2,3,4,5,6-Pentabromodiphenylether (BDE-116)	EPA 1614A	10120704	NELAP	LA
9720 - 2,3,4-Tribromodiphenylether (BDE-21)	EPA 1614A	10120704	NELAP	LA
9731 - 2,4',6-Tribromodiphenylether (BDE-32)	EPA 1614A	10120704	NELAP	LA
9774 - 2,4,4',6-Tetrabromodiphenylether (BDE-75)	EPA 1614A	10120704	NELAP	LA
9729 - 2,4,6-Tribromodiphenylether (BDE-30)	EPA 1614A	10120704	NELAP	LA
9706 - 2,4-Dibromodiphenylether (BDE-7)	EPA 1614A	10120704	NELAP	LA
9709 - 2,6-Dibromodiphenylether (BDE-10)	EPA 1614A	10120704	NELAP	LA
9700 - 2-Bromodiphenylether (BDE-1)	EPA 1614A	10120704	NELAP	LA
9865 - 3,3',4,4',5,5'-Hexabromodiphenylether (BDE-169)	EPA 1614A	10120704	NELAP	LA
9823 - 3,3',4,4',5-Pentabromodiphenylether (BDE-126)	EPA 1614A	10120704	NELAP	LA
9776 - 3,3',4,4'-Tetrabromodiphenylether (BDE-77)	EPA 1614A	10120704	NELAP	LA
9734 - 3,3',4-Tribromodiphenylether (BDE-35)	EPA 1614A	10120704	NELAP	LA
9712 - 3,4'-Dibromodiphenylether (BDE-13)	EPA 1614A	10120704	NELAP	LA
9736 - 3,4,4'-Tribromodiphenylether (BDE-37)	EPA 1614A	10120704	NELAP	LA
9711 - 3,4-Dibromodiphenylether (BDE-12)	EPA 1614A	10120704	NELAP	LA
9701 - 3-Bromodiphenylether (BDE-2)	EPA 1614A	10120704	NELAP	LA
9714 - 4,4'-Dibromodiphenylether (BDE-15)	EPA 1614A	10120704	NELAP	LA
5660 - 4-Bromophenyl phenyl ether	EPA 1614A	10120704	NELAP	LA
8902 - Coelution - Dibromodiphenyl ethers (BDE-8 + BDE-11)	EPA 1614A	10120704	NELAP	LA
9908 - Coelution - Pentabromodiphenyl ethers (BDE-119 + BDE-120)	EPA 1614A	10120704	NELAP	LA
9909 - Coelution - Tribromodiphenyl ethers (BDE-28 + BDE-33)	EPA 1614A	10120704	NELAP	LA
9905 - Decabromodiphenylether (BDE-209)	EPA 1614A	10120704	NELAP	LA
9105 - 2,2',3,3',4,4',5,5',6,6'-	EPA 1668A	10129405	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
Decachlorobiphenyl (BZ-209)				
9095 - 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ-206)	EPA 1668A	10129405	NELAP	LA
9090 - 2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ-194)	EPA 1668A	10129405	NELAP	LA
9102 - 2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ-196)	EPA 1668A	10129405	NELAP	LA
9101 - 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ-207)	EPA 1668A	10129405	NELAP	LA
9103 - 2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ-195)	EPA 1668A	10129405	NELAP	LA
9065 - 2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ-170)	EPA 1668A	10129405	NELAP	LA
9104 - 2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ-197)	EPA 1668A	10129405	NELAP	LA
9106 - 2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ-171)	EPA 1668A	10129405	NELAP	LA
9020 - 2,2',3,3',4,4'-Hexachlorobiphenyl (BZ-128)	EPA 1668A	10129405	NELAP	LA
9114 - 2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ-177)	EPA 1668A	10129405	NELAP	LA
9112 - 2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ-201)	EPA 1668A	10129405	NELAP	LA
9115 - 2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ-175)	EPA 1668A	10129405	NELAP	LA
9117 - 2,2',3,3',4,5'-Hexachlorobiphenyl (BZ-130)	EPA 1668A	10129405	NELAP	LA
9108 - 2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ-199)	EPA 1668A	10129405	NELAP	LA
9107 - 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ-208)	EPA 1668A	10129405	NELAP	LA
9109 - 2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ-198)	EPA 1668A	10129405	NELAP	LA
9110 - 2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ-172)	EPA 1668A	10129405	NELAP	LA
9116 - 2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ-174)	EPA 1668A	10129405	NELAP	LA
9111 - 2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ-200)	EPA 1668A	10129405	NELAP	LA
9113 - 2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ-173)	EPA 1668A	10129405	NELAP	LA
9118 - 2,2',3,3',4,5-Hexachlorobiphenyl (BZ-129)	EPA 1668A	10129405	NELAP	LA
9120 - 2,2',3,3',4,6'-Hexachlorobiphenyl (BZ-132)	EPA 1668A	10129405	NELAP	LA
9119 - 2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ-176)	EPA 1668A	10129405	NELAP	LA
9121 - 2,2',3,3',4,6-Hexachlorobiphenyl (BZ-131)	EPA 1668A	10129405	NELAP	LA
9122 - 2,2',3,3',4-Pentachlorobiphenyl (BZ-82)	EPA 1668A	10129405	NELAP	LA
9123 - 2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ-202)	EPA 1668A	10129405	NELAP	LA
9124 - 2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ-178)	EPA 1668A	10129405	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
9125 - 2,2',3,3',5,5'-Hexachlorobiphenyl (BZ-133)	EPA 1668A	10129405	NELAP	LA
9127 - 2,2',3,3',5,6'-Hexachlorobiphenyl (BZ-135)	EPA 1668A	10129405	NELAP	LA
9126 - 2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ-179)	EPA 1668A	10129405	NELAP	LA
9128 - 2,2',3,3',5,6-Hexachlorobiphenyl (BZ-134)	EPA 1668A	10129405	NELAP	LA
9129 - 2,2',3,3',5-Pentachlorobiphenyl (BZ-83)	EPA 1668A	10129405	NELAP	LA
9130 - 2,2',3,3',6,6'-Hexachlorobiphenyl (BZ-136)	EPA 1668A	10129405	NELAP	LA
9131 - 2,2',3,3',6-Pentachlorobiphenyl (BZ-84)	EPA 1668A	10129405	NELAP	LA
9132 - 2,2',3,3'-Tetrachlorobiphenyl (BZ-40)	EPA 1668A	10129405	NELAP	LA
9151 - 2,2',3,4',5',6-Hexachlorobiphenyl (BZ-149)	EPA 1668A	10129405	NELAP	LA
9154 - 2,2',3,4',5'-Pentachlorobiphenyl (BZ-97)	EPA 1668A	10129405	NELAP	LA
9080 - 2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ-187)	EPA 1668A	10129405	NELAP	LA
9144 - 2,2',3,4',5,5'-Hexachlorobiphenyl (BZ-146)	EPA 1668A	10129405	NELAP	LA
9147 - 2,2',3,4',5,6'-Hexachlorobiphenyl (BZ-148)	EPA 1668A	10129405	NELAP	LA
9146 - 2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ-188)	EPA 1668A	10129405	NELAP	LA
9149 - 2,2',3,4',5,6-Hexachlorobiphenyl (BZ-147)	EPA 1668A	10129405	NELAP	LA
9155 - 2,2',3,4',5-Pentachlorobiphenyl (BZ-90)	EPA 1668A	10129405	NELAP	LA
9159 - 2,2',3,4',6'-Pentachlorobiphenyl (BZ-98)	EPA 1668A	10129405	NELAP	LA
9157 - 2,2',3,4',6,6'-Hexachlorobiphenyl (BZ-150)	EPA 1668A	10129405	NELAP	LA
9160 - 2,2',3,4',6-Pentachlorobiphenyl (BZ-91)	EPA 1668A	10129405	NELAP	LA
9162 - 2,2',3,4'-Tetrachlorobiphenyl (BZ-42)	EPA 1668A	10129405	NELAP	LA
9075 - 2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ-183)	EPA 1668A	10129405	NELAP	LA
9025 - 2,2',3,4,4',5'-Hexachlorobiphenyl (BZ-138)	EPA 1668A	10129405	NELAP	LA
9133 - 2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ-203)	EPA 1668A	10129405	NELAP	LA
9134 - 2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ-180)	EPA 1668A	10129405	NELAP	LA
9136 - 2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ-182)	EPA 1668A	10129405	NELAP	LA
9135 - 2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ-204)	EPA 1668A	10129405	NELAP	LA
9137 - 2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ-181)	EPA 1668A	10129405	NELAP	LA
9138 - 2,2',3,4,4',5-Hexachlorobiphenyl	EPA 1668A	10129405	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
(BZ-137)				
9140 - 2,2',3,4,4',6'-Hexachlorobiphenyl (BZ-140)	EPA 1668A	10129405	NELAP	LA
9139 - 2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ-184)	EPA 1668A	10129405	NELAP	LA
9141 - 2,2',3,4,4',6-Hexachlorobiphenyl (BZ-139)	EPA 1668A	10129405	NELAP	LA
9142 - 2,2',3,4,4'-Pentachlorobiphenyl (BZ-85)	EPA 1668A	10129405	NELAP	LA
9150 - 2,2',3,4,5',6-Hexachlorobiphenyl (BZ-144)	EPA 1668A	10129405	NELAP	LA
8975 - 2,2',3,4,5'-Pentachlorobiphenyl (BZ-87)	EPA 1668A	10129405	NELAP	LA
9143 - 2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ-185)	EPA 1668A	10129405	NELAP	LA
9030 - 2,2',3,4,5,5'-Hexachlorobiphenyl (BZ-141)	EPA 1668A	10129405	NELAP	LA
9152 - 2,2',3,4,5,6'-Hexachlorobiphenyl (BZ-143)	EPA 1668A	10129405	NELAP	LA
9145 - 2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ-186)	EPA 1668A	10129405	NELAP	LA
9148 - 2,2',3,4,5,6-Hexachlorobiphenyl (BZ-142)	EPA 1668A	10129405	NELAP	LA
9153 - 2,2',3,4,5-Pentachlorobiphenyl (BZ-86)	EPA 1668A	10129405	NELAP	LA
9161 - 2,2',3,4,6'-Pentachlorobiphenyl (BZ-89)	EPA 1668A	10129405	NELAP	LA
9156 - 2,2',3,4,6,6'-Hexachlorobiphenyl (BZ-145)	EPA 1668A	10129405	NELAP	LA
9158 - 2,2',3,4,6-Pentachlorobiphenyl (BZ-88)	EPA 1668A	10129405	NELAP	LA
9163 - 2,2',3,4-Tetrachlorobiphenyl (BZ-41)	EPA 1668A	10129405	NELAP	LA
9166 - 2,2',3,5',6-Pentachlorobiphenyl (BZ-95)	EPA 1668A	10129405	NELAP	LA
8945 - 2,2',3,5'-Tetrachlorobiphenyl (BZ-44)	EPA 1668A	10129405	NELAP	LA
9035 - 2,2',3,5,5',6-Hexachlorobiphenyl (BZ-151)	EPA 1668A	10129405	NELAP	LA
9164 - 2,2',3,5,5'-Pentachlorobiphenyl (BZ-92)	EPA 1668A	10129405	NELAP	LA
9167 - 2,2',3,5,6'-Pentachlorobiphenyl (BZ-94)	EPA 1668A	10129405	NELAP	LA
9165 - 2,2',3,5,6,6'-Hexachlorobiphenyl (BZ-152)	EPA 1668A	10129405	NELAP	LA
9168 - 2,2',3,5,6-Pentachlorobiphenyl (BZ-93)	EPA 1668A	10129405	NELAP	LA
9169 - 2,2',3,5-Tetrachlorobiphenyl (BZ-43)	EPA 1668A	10129405	NELAP	LA
9171 - 2,2',3,6'-Tetrachlorobiphenyl (BZ-46)	EPA 1668A	10129405	NELAP	LA
9170 - 2,2',3,6,6'-Pentachlorobiphenyl (BZ-96)	EPA 1668A	10129405	NELAP	LA
9172 - 2,2',3,6-Tetrachlorobiphenyl (BZ-45)	EPA 1668A	10129405	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
9173 - 2,2',3-Trichlorobiphenyl (BZ-16)	EPA 1668A	10129405	NELAP	LA
9040 - 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ-153)	EPA 1668A	10129405	NELAP	LA
9174 - 2,2',4,4',5,6'-Hexachlorobiphenyl (BZ-154)	EPA 1668A	10129405	NELAP	LA
9175 - 2,2',4,4',5-Pentachlorobiphenyl (BZ-99)	EPA 1668A	10129405	NELAP	LA
9176 - 2,2',4,4',6,6'-Hexachlorobiphenyl (BZ-155)	EPA 1668A	10129405	NELAP	LA
9177 - 2,2',4,4',6-Pentachlorobiphenyl (BZ-100)	EPA 1668A	10129405	NELAP	LA
9178 - 2,2',4,4'-Tetrachlorobiphenyl (BZ-47)	EPA 1668A	10129405	NELAP	LA
9179 - 2,2',4,5',6-Pentachlorobiphenyl (BZ-103)	EPA 1668A	10129405	NELAP	LA
8950 - 2,2',4,5'-Tetrachlorobiphenyl (BZ-49)	EPA 1668A	10129405	NELAP	LA
8980 - 2,2',4,5,5'-Pentachlorobiphenyl (BZ-101)	EPA 1668A	10129405	NELAP	LA
9180 - 2,2',4,5,6'-Pentachlorobiphenyl (BZ-102)	EPA 1668A	10129405	NELAP	LA
9181 - 2,2',4,5-Tetrachlorobiphenyl (BZ-48)	EPA 1668A	10129405	NELAP	LA
9183 - 2,2',4,6'-Tetrachlorobiphenyl (BZ-51)	EPA 1668A	10129405	NELAP	LA
9182 - 2,2',4,6,6'-Pentachlorobiphenyl (BZ-104)	EPA 1668A	10129405	NELAP	LA
9184 - 2,2',4,6-Tetrachlorobiphenyl (BZ-50)	EPA 1668A	10129405	NELAP	LA
9185 - 2,2',4-Trichlorobiphenyl (BZ-17)	EPA 1668A	10129405	NELAP	LA
8955 - 2,2',5,5'-Tetrachlorobiphenyl (BZ-52)	EPA 1668A	10129405	NELAP	LA
9186 - 2,2',5,6'-Tetrachlorobiphenyl (BZ-53)	EPA 1668A	10129405	NELAP	LA
8930 - 2,2',5-Trichlorobiphenyl (BZ-18)	EPA 1668A	10129405	NELAP	LA
9187 - 2,2',6,6'-Tetrachlorobiphenyl (BZ-54)	EPA 1668A	10129405	NELAP	LA
9188 - 2,2',6-Trichlorobiphenyl (BZ-19)	EPA 1668A	10129405	NELAP	LA
9189 - 2,2'-Dichlorobiphenyl (BZ-4)	EPA 1668A	10129405	NELAP	LA
9224 - 2,3',4',5',6-Pentachlorobiphenyl (BZ-125)	EPA 1668A	10129405	NELAP	LA
9229 - 2,3',4',5'-Tetrachlorobiphenyl (BZ-76)	EPA 1668A	10129405	NELAP	LA
9222 - 2,3',4',5,5'-Pentachlorobiphenyl (BZ-124)	EPA 1668A	10129405	NELAP	LA
9230 - 2,3',4',5-Tetrachlorobiphenyl (BZ-70)	EPA 1668A	10129405	NELAP	LA
9237 - 2,3',4',6-Tetrachlorobiphenyl (BZ-71)	EPA 1668A	10129405	NELAP	LA
9239 - 2,3',4'-Trichlorobiphenyl (BZ-33)	EPA 1668A	10129405	NELAP	LA
9218 - 2,3',4,4',5',6-Hexachlorobiphenyl (BZ-168)	EPA 1668A	10129405	NELAP	LA
9011 - 2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	EPA 1668A	10129405	NELAP	LA
9000 - 2,3',4,4',5'-Pentachlorobiphenyl	EPA 1668A	10129405	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
(BZ-123)				
9055 - 2,3',4,4',5,5'-Hexachlorobiphenyl (BZ-167)	EPA 1668A	10129405	NELAP	LA
8995 - 2,3',4,4',5-Pentachlorobiphenyl (BZ-118)	EPA 1668A	10129405	NELAP	LA
9220 - 2,3',4,4',6-Pentachlorobiphenyl (BZ-119)	EPA 1668A	10129405	NELAP	LA
8960 - 2,3',4,4'-Tetrachlorobiphenyl (BZ-66)	EPA 1668A	10129405	NELAP	LA
9226 - 2,3',4,5',6-Pentachlorobiphenyl (BZ-121)	EPA 1668A	10129405	NELAP	LA
9231 - 2,3',4,5'-Tetrachlorobiphenyl (BZ-68)	EPA 1668A	10129405	NELAP	LA
9223 - 2,3',4,5,5'-Pentachlorobiphenyl (BZ-120)	EPA 1668A	10129405	NELAP	LA
9232 - 2,3',4,5-Tetrachlorobiphenyl (BZ-67)	EPA 1668A	10129405	NELAP	LA
9235 - 2,3',4,6-Tetrachlorobiphenyl (BZ-69)	EPA 1668A	10129405	NELAP	LA
9240 - 2,3',4-Trichlorobiphenyl (BZ-25)	EPA 1668A	10129405	NELAP	LA
9244 - 2,3',5',6-Tetrachlorobiphenyl (BZ-73)	EPA 1668A	10129405	NELAP	LA
9246 - 2,3',5'-Trichlorobiphenyl (BZ-34)	EPA 1668A	10129405	NELAP	LA
9242 - 2,3',5,5'-Tetrachlorobiphenyl (BZ-72)	EPA 1668A	10129405	NELAP	LA
8935 - 2,3',5-Trichlorobiphenyl (BZ-26)	EPA 1668A	10129405	NELAP	LA
9248 - 2,3',6-Trichlorobiphenyl (BZ-27)	EPA 1668A	10129405	NELAP	LA
9249 - 2,3'-Dichlorobiphenyl (BZ-6)	EPA 1668A	10129405	NELAP	LA
9201 - 2,3,3',4',5',6-Hexachlorobiphenyl (BZ-164)	EPA 1668A	10129405	NELAP	LA
9202 - 2,3,3',4',5'-Pentachlorobiphenyl (BZ-122)	EPA 1668A	10129405	NELAP	LA
9195 - 2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ-193)	EPA 1668A	10129405	NELAP	LA
9197 - 2,3,3',4',5,5'-Hexachlorobiphenyl (BZ-162)	EPA 1668A	10129405	NELAP	LA
9199 - 2,3,3',4',5,6-Hexachlorobiphenyl (BZ-163)	EPA 1668A	10129405	NELAP	LA
9205 - 2,3,3',4',5-Pentachlorobiphenyl (BZ-107)	EPA 1668A	10129405	NELAP	LA
8990 - 2,3,3',4',6-Pentachlorobiphenyl (BZ-110)	EPA 1668A	10129405	NELAP	LA
9207 - 2,3,3',4'-Tetrachlorobiphenyl (BZ-56)	EPA 1668A	10129405	NELAP	LA
9192 - 2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ-191)	EPA 1668A	10129405	NELAP	LA
9045 - 2,3,3',4,4',5'-Hexachlorobiphenyl (BZ-157)	EPA 1668A	10129405	NELAP	LA
9190 - 2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ-205)	EPA 1668A	10129405	NELAP	LA
9085 - 2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ-189)	EPA 1668A	10129405	NELAP	LA
9191 - 2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ-190)	EPA 1668A	10129405	NELAP	LA
9050 - 2,3,3',4,4',5-Hexachlorobiphenyl	EPA 1668A	10129405	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
(BZ-156)				
9193 - 2,3,3',4,4',6-Hexachlorobiphenyl (BZ-158)	EPA 1668A	10129405	NELAP	LA
8985 - 2,3,3',4,4'-Pentachlorobiphenyl (BZ-105)	EPA 1668A	10129405	NELAP	LA
9200 - 2,3,3',4,5',6-Hexachlorobiphenyl (BZ-161)	EPA 1668A	10129405	NELAP	LA
9203 - 2,3,3',4,5'-Pentachlorobiphenyl (BZ-108)	EPA 1668A	10129405	NELAP	LA
9194 - 2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ-192)	EPA 1668A	10129405	NELAP	LA
9196 - 2,3,3',4,5,5'-Hexachlorobiphenyl (BZ-159)	EPA 1668A	10129405	NELAP	LA
9198 - 2,3,3',4,5,6-Hexachlorobiphenyl (BZ-160)	EPA 1668A	10129405	NELAP	LA
9204 - 2,3,3',4,5-Pentachlorobiphenyl (BZ-106)	EPA 1668A	10129405	NELAP	LA
9206 - 2,3,3',4,6-Pentachlorobiphenyl (BZ-109)	EPA 1668A	10129405	NELAP	LA
9208 - 2,3,3',4-Tetrachlorobiphenyl (BZ-55)	EPA 1668A	10129405	NELAP	LA
9212 - 2,3,3',5',6-Pentachlorobiphenyl (BZ-113)	EPA 1668A	10129405	NELAP	LA
9213 - 2,3,3',5'-Tetrachlorobiphenyl (BZ-58)	EPA 1668A	10129405	NELAP	LA
9209 - 2,3,3',5,5',6-Hexachlorobiphenyl (BZ-165)	EPA 1668A	10129405	NELAP	LA
9210 - 2,3,3',5,5'-Pentachlorobiphenyl (BZ-111)	EPA 1668A	10129405	NELAP	LA
9211 - 2,3,3',5,6-Pentachlorobiphenyl (BZ-112)	EPA 1668A	10129405	NELAP	LA
9214 - 2,3,3',5-Tetrachlorobiphenyl (BZ-57)	EPA 1668A	10129405	NELAP	LA
9215 - 2,3,3',6-Tetrachlorobiphenyl (BZ-59)	EPA 1668A	10129405	NELAP	LA
9216 - 2,3,3'-Trichlorobiphenyl (BZ-20)	EPA 1668A	10129405	NELAP	LA
9227 - 2,3,4',5,6-Pentachlorobiphenyl (BZ-117)	EPA 1668A	10129405	NELAP	LA
9233 - 2,3,4',5-Tetrachlorobiphenyl (BZ-63)	EPA 1668A	10129405	NELAP	LA
9236 - 2,3,4',6-Tetrachlorobiphenyl (BZ-64)	EPA 1668A	10129405	NELAP	LA
9241 - 2,3,4'-Trichlorobiphenyl (BZ-22)	EPA 1668A	10129405	NELAP	LA
9217 - 2,3,4,4',5,6-Hexachlorobiphenyl (BZ-166)	EPA 1668A	10129405	NELAP	LA
9005 - 2,3,4,4',5-Pentachlorobiphenyl (BZ-114)	EPA 1668A	10129405	NELAP	LA
9219 - 2,3,4,4',6-Pentachlorobiphenyl (BZ-115)	EPA 1668A	10129405	NELAP	LA
9221 - 2,3,4,4'-Tetrachlorobiphenyl (BZ-60)	EPA 1668A	10129405	NELAP	LA
9225 - 2,3,4,5,6-Pentachlorobiphenyl (BZ-116)	EPA 1668A	10129405	NELAP	LA
9228 - 2,3,4,5-Tetrachlorobiphenyl (BZ-61)	EPA 1668A	10129405	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
9234 - 2,3,4,6-Tetrachlorobiphenyl (BZ-62)	EPA 1668A	10129405	NELAP	LA
9238 - 2,3,4-Trichlorobiphenyl (BZ-21)	EPA 1668A	10129405	NELAP	LA
9243 - 2,3,5,6-Tetrachlorobiphenyl (BZ-65)	EPA 1668A	10129405	NELAP	LA
9245 - 2,3,5-Trichlorobiphenyl (BZ-23)	EPA 1668A	10129405	NELAP	LA
9247 - 2,3,6-Trichlorobiphenyl (BZ-24)	EPA 1668A	10129405	NELAP	LA
8920 - 2,3-Dichlorobiphenyl (BZ-5)	EPA 1668A	10129405	NELAP	LA
8940 - 2,4',5-Trichlorobiphenyl (BZ-31)	EPA 1668A	10129405	NELAP	LA
9255 - 2,4',6-Trichlorobiphenyl (BZ-32)	EPA 1668A	10129405	NELAP	LA
9256 - 2,4'-Dichlorobiphenyl (BZ-8)	EPA 1668A	10129405	NELAP	LA
9250 - 2,4,4',5-Tetrachlorobiphenyl (BZ-74)	EPA 1668A	10129405	NELAP	LA
9251 - 2,4,4',6-Tetrachlorobiphenyl (BZ-75)	EPA 1668A	10129405	NELAP	LA
9252 - 2,4,4'-Trichlorobiphenyl (BZ-28)	EPA 1668A	10129405	NELAP	LA
9253 - 2,4,5-Trichlorobiphenyl (BZ-29)	EPA 1668A	10129405	NELAP	LA
9254 - 2,4,6-Trichlorobiphenyl (BZ-30)	EPA 1668A	10129405	NELAP	LA
9257 - 2,4-Dichlorobiphenyl (BZ-7)	EPA 1668A	10129405	NELAP	LA
9258 - 2,5-Dichlorobiphenyl (BZ-9)	EPA 1668A	10129405	NELAP	LA
9259 - 2,6-Dichlorobiphenyl (BZ-10)	EPA 1668A	10129405	NELAP	LA
8915 - 2-Chlorobiphenyl (BZ-1)	EPA 1668A	10129405	NELAP	LA
9060 - 3,3',4,4',5,5'-Hexachlorobiphenyl (BZ-169)	EPA 1668A	10129405	NELAP	LA
9015 - 3,3',4,4',5-Pentachlorobiphenyl (BZ-126)	EPA 1668A	10129405	NELAP	LA
8965 - 3,3',4,4'-Tetrachlorobiphenyl (BZ-77)	EPA 1668A	10129405	NELAP	LA
9261 - 3,3',4,5'-Tetrachlorobiphenyl (BZ-79)	EPA 1668A	10129405	NELAP	LA
9260 - 3,3',4,5,5'-Pentachlorobiphenyl (BZ-127)	EPA 1668A	10129405	NELAP	LA
9262 - 3,3',4,5-Tetrachlorobiphenyl (BZ-78)	EPA 1668A	10129405	NELAP	LA
9263 - 3,3',4-Trichlorobiphenyl (BZ-35)	EPA 1668A	10129405	NELAP	LA
9264 - 3,3',5,5'-Tetrachlorobiphenyl (BZ-80)	EPA 1668A	10129405	NELAP	LA
9265 - 3,3',5-Trichlorobiphenyl (BZ-36)	EPA 1668A	10129405	NELAP	LA
8925 - 3,3'-Dichlorobiphenyl (BZ-11)	EPA 1668A	10129405	NELAP	LA
9268 - 3,4',5-Trichlorobiphenyl (BZ-39)	EPA 1668A	10129405	NELAP	LA
9269 - 3,4'-Dichlorobiphenyl (BZ-13)	EPA 1668A	10129405	NELAP	LA
8970 - 3,4,4',5-Tetrachlorobiphenyl (BZ-81)	EPA 1668A	10129405	NELAP	LA
9266 - 3,4,4'-Trichlorobiphenyl (BZ-37)	EPA 1668A	10129405	NELAP	LA
9267 - 3,4,5-Trichlorobiphenyl (BZ-38)	EPA 1668A	10129405	NELAP	LA
9270 - 3,4-Dichlorobiphenyl (BZ-12)	EPA 1668A	10129405	NELAP	LA
9271 - 3,5-Dichlorobiphenyl (BZ-14)	EPA 1668A	10129405	NELAP	LA
9272 - 3-Chlorobiphenyl (BZ-2)	EPA 1668A	10129405	NELAP	LA
9273 - 4,4'-Dichlorobiphenyl (BZ-15)	EPA 1668A	10129405	NELAP	LA
9274 - 4-Chlorobiphenyl (BZ-3)	EPA 1668A	10129405	NELAP	LA
8580 - 2,4'-DDD	EPA 1699	10133105	NELAP	LA
8585 - 2,4'-DDE	EPA 1699	10133105	NELAP	LA
8590 - 2,4'-DDT	EPA 1699	10133105	NELAP	LA
7355 - 4,4'-DDD	EPA 1699	10133105	NELAP	LA
7360 - 4,4'-DDE	EPA 1699	10133105	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
7361 - 4,4'-DDMU	EPA 1699	10133105	NELAP	LA
7365 - 4,4'-DDT	EPA 1699	10133105	NELAP	LA
7025 - Aldrin	EPA 1699	10133105	NELAP	LA
7470 - Dieldrin	EPA 1699	10133105	NELAP	LA
7510 - Endosulfan I	EPA 1699	10133105	NELAP	LA
7515 - Endosulfan II	EPA 1699	10133105	NELAP	LA
7520 - Endosulfan sulfate	EPA 1699	10133105	NELAP	LA
7540 - Endrin	EPA 1699	10133105	NELAP	LA
7530 - Endrin aldehyde	EPA 1699	10133105	NELAP	LA
7535 - Endrin ketone	EPA 1699	10133105	NELAP	LA
7685 - Heptachlor	EPA 1699	10133105	NELAP	LA
7690 - Heptachlor epoxide	EPA 1699	10133105	NELAP	LA
7810 - Methoxychlor	EPA 1699	10133105	NELAP	LA
7870 - Mirex	EPA 1699	10133105	NELAP	LA
7110 - alpha-BHC (alpha-Hexachlorocyclohexane)	EPA 1699	10133105	NELAP	LA
7240 - alpha-Chlordane	EPA 1699	10133105	NELAP	LA
7115 - beta-BHC (beta-Hexachlorocyclohexane)	EPA 1699	10133105	NELAP	LA
7925 - cis-Nonachlor	EPA 1699	10133105	NELAP	LA
7105 - delta-BHC	EPA 1699	10133105	NELAP	LA
7120 - gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	EPA 1699	10133105	NELAP	LA
7245 - gamma-Chlordane	EPA 1699	10133105	NELAP	LA
7910 - trans-Nonachlor	EPA 1699	10133105	NELAP	LA
1444 - Separatory Funnel Liquid-liquid extraction	EPA 3510C	10138202	NELAP	LA
1452 - Soxhlet Extraction	EPA 3540C	10140202	NELAP	LA
1030 - Cadmium	EPA 6020	10156000	NELAP	LA
1040 - Chromium	EPA 6020	10156000	NELAP	LA
1050 - Cobalt	EPA 6020	10156000	NELAP	LA
1055 - Copper	EPA 6020	10156000	NELAP	LA
1070 - Iron	EPA 6020	10156000	NELAP	LA
1075 - Lead	EPA 6020	10156000	NELAP	LA
1090 - Manganese	EPA 6020	10156000	NELAP	LA
1095 - Mercury	EPA 6020	10156000	NELAP	LA
1100 - Molybdenum	EPA 6020	10156000	NELAP	LA
1105 - Nickel	EPA 6020	10156000	NELAP	LA
1140 - Selenium	EPA 6020	10156000	NELAP	LA
1150 - Silver	EPA 6020	10156000	NELAP	LA
1165 - Thallium	EPA 6020	10156000	NELAP	LA
1175 - Tin	EPA 6020	10156000	NELAP	LA
1910 - Total Phosphorus	EPA 6020	10156000	NELAP	LA
1185 - Vanadium	EPA 6020	10156000	NELAP	LA
1190 - Zinc	EPA 6020	10156000	NELAP	LA
1030 - Cadmium	EPA 6020	10156204	NELAP	LA
1040 - Chromium	EPA 6020	10156204	NELAP	LA
1050 - Cobalt	EPA 6020	10156204	NELAP	LA
1055 - Copper	EPA 6020	10156204	NELAP	LA
1070 - Iron	EPA 6020	10156204	NELAP	LA
1075 - Lead	EPA 6020	10156204	NELAP	LA
1090 - Manganese	EPA 6020	10156204	NELAP	LA
1095 - Mercury	EPA 6020	10156204	NELAP	LA
1100 - Molybdenum	EPA 6020	10156204	NELAP	LA
1105 - Nickel	EPA 6020	10156204	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
1140 - Selenium	EPA 6020	10156204	NELAP	LA
1150 - Silver	EPA 6020	10156204	NELAP	LA
1165 - Thallium	EPA 6020	10156204	NELAP	LA
1175 - Tin	EPA 6020	10156204	NELAP	LA
1910 - Total Phosphorus	EPA 6020	10156204	NELAP	LA
1185 - Vanadium	EPA 6020	10156204	NELAP	LA
1190 - Zinc	EPA 6020	10156204	NELAP	LA
1000 - Aluminum	EPA 6020A	10156204	NELAP	LA
1005 - Antimony	EPA 6020A	10156408	NELAP	LA
1010 - Arsenic	EPA 6020A	10156408	NELAP	LA
1015 - Barium	EPA 6020A	10156408	NELAP	LA
1020 - Beryllium	EPA 6020A	10156408	NELAP	LA
1030 - Cadmium	EPA 6020A	10156408	NELAP	LA
1040 - Chromium	EPA 6020A	10156408	NELAP	LA
1050 - Cobalt	EPA 6020A	10156408	NELAP	LA
1055 - Copper	EPA 6020A	10156408	NELAP	LA
1070 - Iron	EPA 6020A	10156408	NELAP	LA
1075 - Lead	EPA 6020A	10156408	NELAP	LA
1090 - Manganese	EPA 6020A	10156408	NELAP	LA
1100 - Molybdenum	EPA 6020A	10156408	NELAP	LA
1105 - Nickel	EPA 6020A	10156408	NELAP	LA
1909 - Phosphorus	EPA 6020A	10156408	NELAP	LA
1140 - Selenium	EPA 6020A	10156408	NELAP	LA
1150 - Silver	EPA 6020A	10156408	NELAP	LA
1165 - Thallium	EPA 6020A	10156408	NELAP	LA
1175 - Tin	EPA 6020A	10156408	NELAP	LA
1910 - Total Phosphorus	EPA 6020A	10156408	NELAP	LA
1185 - Vanadium	EPA 6020A	10156408	NELAP	LA
1190 - Zinc	EPA 6020A	10156408	NELAP	LA
1000 - Aluminum	EPA 6020A, Rev.1	10156419	NELAP	LA
1005 - Antimony	EPA 6020A, Rev.1	10156419	NELAP	LA
1010 - Arsenic	EPA 6020A, Rev.1	10156419	NELAP	LA
1015 - Barium	EPA 6020A, Rev.1	10156419	NELAP	LA
1020 - Beryllium	EPA 6020A, Rev.1	10156419	NELAP	LA
1030 - Cadmium	EPA 6020A, Rev.1	10156419	NELAP	LA
1040 - Chromium	EPA 6020A, Rev.1	10156419	NELAP	LA
1050 - Cobalt	EPA 6020A, Rev.1	10156419	NELAP	LA
1055 - Copper	EPA 6020A, Rev.1	10156419	NELAP	LA
1070 - Iron	EPA 6020A, Rev.1	10156419	NELAP	LA
1075 - Lead	EPA 6020A, Rev.1	10156419	NELAP	LA
1090 - Manganese	EPA 6020A, Rev.1	10156419	NELAP	LA
1100 - Molybdenum	EPA 6020A, Rev.1	10156419	NELAP	LA
1105 - Nickel	EPA 6020A, Rev.1	10156419	NELAP	LA
1140 - Selenium	EPA 6020A, Rev.1	10156419	NELAP	LA
1150 - Silver	EPA 6020A, Rev.1	10156419	NELAP	LA
1165 - Thallium	EPA 6020A, Rev.1	10156419	NELAP	LA
1175 - Tin	EPA 6020A, Rev.1	10156419	NELAP	LA
1185 - Vanadium	EPA 6020A, Rev.1	10156419	NELAP	LA
1190 - Zinc	EPA 6020A, Rev.1	10156419	NELAP	LA
5160 - 1,1,1-Trichloroethane	EPA 8260B	10184802	NELAP	LA
5110 - 1,1,2,2-Tetrachloroethane	EPA 8260B	10184802	NELAP	LA
5165 - 1,1,2-Trichloroethane	EPA 8260B	10184802	NELAP	LA
4630 - 1,1-Dichloroethane	EPA 8260B	10184802	NELAP	LA
5180 - 1,2,3-Trichloropropane	EPA 8260B	10184802	NELAP	LA
4635 - 1,2-Dichloroethane (Ethylene	EPA 8260B	10184802	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
dichloride)				
4655 - 1,2-Dichloropropane	EPA 8260B	10184802	NELAP	LA
4410 - 2-Butanone (Methyl ethyl ketone, MEK)	EPA 8260B	10184802	NELAP	LA
4860 - 2-Hexanone	EPA 8260B	10184802	NELAP	LA
4315 - Acetone	EPA 8260B	10184802	NELAP	LA
4375 - Benzene	EPA 8260B	10184802	NELAP	LA
4395 - Bromodichloromethane	EPA 8260B	10184802	NELAP	LA
4400 - Bromoform	EPA 8260B	10184802	NELAP	LA
4450 - Carbon disulfide	EPA 8260B	10184802	NELAP	LA
4455 - Carbon tetrachloride	EPA 8260B	10184802	NELAP	LA
4475 - Chlorobenzene	EPA 8260B	10184802	NELAP	LA
4575 - Chlorodibromomethane (dibromochloromethane)	EPA 8260B	10184802	NELAP	LA
4485 - Chloroethane (Ethyl chloride)	EPA 8260B	10184802	NELAP	LA
4505 - Chloroform	EPA 8260B	10184802	NELAP	LA
4595 - Dibromomethane (Methylene bromide)	EPA 8260B	10184802	NELAP	LA
4765 - Ethylbenzene	EPA 8260B	10184802	NELAP	LA
4950 - Methyl bromide (Bromomethane)	EPA 8260B	10184802	NELAP	LA
4960 - Methyl chloride (Chloromethane)	EPA 8260B	10184802	NELAP	LA
4975 - Methylene chloride (Dichlorormethane)	EPA 8260B	10184802	NELAP	LA
5100 - Styrene	EPA 8260B	10184802	NELAP	LA
5115 - Tetrachloroethylene (Perchloroethylene)	EPA 8260B	10184802	NELAP	LA
5140 - Toluene	EPA 8260B	10184802	NELAP	LA
5170 - Trichloroethene (Trichloroethylene)	EPA 8260B	10184802	NELAP	LA
5175 - Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	EPA 8260B	10184802	NELAP	LA
5235 - Vinyl chloride	EPA 8260B	10184802	NELAP	LA
4705 - cis & trans-1,2-Dichloroethene	EPA 8260B	10184802	NELAP	LA
4645 - cis-1,2-Dichloroethylene	EPA 8260B	10184802	NELAP	LA
4680 - cis-1,3-Dichloropropene	EPA 8260B	10184802	NELAP	LA
5240 - m+p-xylene	EPA 8260B	10184802	NELAP	LA
5245 - m-Xylene	EPA 8260B	10184802	NELAP	LA
5250 - o-Xylene	EPA 8260B	10184802	NELAP	LA
5255 - p-Xylene	EPA 8260B	10184802	NELAP	LA
4700 - trans-1,2-Dichloroethylene	EPA 8260B	10184802	NELAP	LA
4685 - trans-1,3-Dichloropropylene	EPA 8260B	10184802	NELAP	LA
6703 - 1,1'-Biphenyl (BZ-0) (Biphenyl)	EPA 8270D	10186002	NELAP	LA
6715 - 1,2,4,5-Tetrachlorobenzene	EPA 8270D	10186002	NELAP	LA
5155 - 1,2,4-Trichlorobenzene	EPA 8270D	10186002	NELAP	LA
4610 - 1,2-Dichlorobenzene	EPA 8270D	10186002	NELAP	LA
6885 - 1,3,5-Trinitrobenzene (1,3,5-TNB)	EPA 8270D	10186002	NELAP	LA
4615 - 1,3-Dichlorobenzene	EPA 8270D	10186002	NELAP	LA
6160 - 1,3-Dinitrobenzene (1,3-DNB)	EPA 8270D	10186002	NELAP	LA
4835 - 1,3-Hexachlorobutadiene	EPA 8270D	10186002	NELAP	LA
4620 - 1,4-Dichlorobenzene	EPA 8270D	10186002	NELAP	LA
5790 - 1-Chloronaphthalene	EPA 8270D	10186002	NELAP	LA
6425 - 1-Naphthylamine	EPA 8270D	10186002	NELAP	LA
6735 - 2,3,4,6-Tetrachlorophenol	EPA 8270D	10186002	NELAP	LA
6835 - 2,4,5-Trichlorophenol	EPA 8270D	10186002	NELAP	LA
6840 - 2,4,6-Trichlorophenol	EPA 8270D	10186002	NELAP	LA
6000 - 2,4-Dichlorophenol	EPA 8270D	10186002	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
6130 - 2,4-Dimethylphenol	EPA 8270D	10186002	NELAP	LA
6175 - 2,4-Dinitrophenol	EPA 8270D	10186002	NELAP	LA
6185 - 2,4-Dinitrotoluene (2,4-DNT)	EPA 8270D	10186002	NELAP	LA
6005 - 2,6-Dichlorophenol	EPA 8270D	10186002	NELAP	LA
6190 - 2,6-Dinitrotoluene (2,6-DNT)	EPA 8270D	10186002	NELAP	LA
5515 - 2-Acetylaminofluorene	EPA 8270D	10186002	NELAP	LA
5795 - 2-Chloronaphthalene	EPA 8270D	10186002	NELAP	LA
5800 - 2-Chlorophenol	EPA 8270D	10186002	NELAP	LA
6360 - 2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	EPA 8270D	10186002	NELAP	LA
5145 - 2-Methylaniline (o-Toluidine)	EPA 8270D	10186002	NELAP	LA
6385 - 2-Methylnaphthalene	EPA 8270D	10186002	NELAP	LA
6400 - 2-Methylphenol (o-Cresol)	EPA 8270D	10186002	NELAP	LA
6430 - 2-Naphthylamine	EPA 8270D	10186002	NELAP	LA
6460 - 2-Nitroaniline	EPA 8270D	10186002	NELAP	LA
6490 - 2-Nitrophenol	EPA 8270D	10186002	NELAP	LA
6355 - 3-Methylcholanthrene	EPA 8270D	10186002	NELAP	LA
6405 - 3-Methylphenol (m-Cresol)	EPA 8270D	10186002	NELAP	LA
6465 - 3-Nitroaniline	EPA 8270D	10186002	NELAP	LA
5540 - 4-Aminobiphenyl	EPA 8270D	10186002	NELAP	LA
5660 - 4-Bromophenyl phenyl ether	EPA 8270D	10186002	NELAP	LA
5700 - 4-Chloro-3-methylphenol	EPA 8270D	10186002	NELAP	LA
5745 - 4-Chloroaniline	EPA 8270D	10186002	NELAP	LA
5825 - 4-Chlorophenyl phenylether	EPA 8270D	10186002	NELAP	LA
6410 - 4-Methylphenol (p-Cresol)	EPA 8270D	10186002	NELAP	LA
6470 - 4-Nitroaniline	EPA 8270D	10186002	NELAP	LA
6500 - 4-Nitrophenol	EPA 8270D	10186002	NELAP	LA
6115 - 7,12-Dimethylbenz(a) anthracene	EPA 8270D	10186002	NELAP	LA
9417 - 7h-Dibenzo(c,g) carbazole	EPA 8270D	10186002	NELAP	LA
5500 - Acenaphthene	EPA 8270D	10186002	NELAP	LA
5505 - Acenaphthylene	EPA 8270D	10186002	NELAP	LA
5510 - Acetophenone	EPA 8270D	10186002	NELAP	LA
5545 - Aniline	EPA 8270D	10186002	NELAP	LA
5555 - Anthracene	EPA 8270D	10186002	NELAP	LA
5575 - Benzo(a)anthracene	EPA 8270D	10186002	NELAP	LA
5580 - Benzo(a)pyrene	EPA 8270D	10186002	NELAP	LA
5585 - Benzo(b)fluoranthene	EPA 8270D	10186002	NELAP	LA
5590 - Benzo(g,h,i)perylene	EPA 8270D	10186002	NELAP	LA
5600 - Benzo(k)fluoranthene	EPA 8270D	10186002	NELAP	LA
5630 - Benzyl alcohol	EPA 8270D	10186002	NELAP	LA
5780 - Bis(2-Chloroisopropyl) ether (2,2-oxybis(1-chloropropane))	EPA 8270D	10186002	NELAP	LA
5670 - Butyl benzyl phthalate	EPA 8270D	10186002	NELAP	LA
5855 - Chrysene	EPA 8270D	10186002	NELAP	LA
6065 - Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	EPA 8270D	10186002	NELAP	LA
5925 - Di-n-butyl phthalate	EPA 8270D	10186002	NELAP	LA
6200 - Di-n-octyl phthalate	EPA 8270D	10186002	NELAP	LA
9354 - Dibenz(a, h) acridine	EPA 8270D	10186002	NELAP	LA
5900 - Dibenz(a, j)acridine	EPA 8270D	10186002	NELAP	LA
5890 - Dibenzo(a,e)pyrene	EPA 8270D	10186002	NELAP	LA
9348 - Dibenzo(a,h) pyrene	EPA 8270D	10186002	NELAP	LA
5895 - Dibenzo(a,h)anthracene	EPA 8270D	10186002	NELAP	LA
9351 - Dibenzo(a,i) pyrene	EPA 8270D	10186002	NELAP	LA
5905 - Dibenzofuran	EPA 8270D	10186002	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
6070 - Diethyl phthalate	EPA 8270D	10186002	NELAP	LA
6135 - Dimethyl phthalate	EPA 8270D	10186002	NELAP	LA
8620 - Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	EPA 8270D	10186002	NELAP	LA
6205 - Diphenylamine	EPA 8270D	10186002	NELAP	LA
6260 - Ethyl methanesulfonate	EPA 8270D	10186002	NELAP	LA
6265 - Fluoranthene	EPA 8270D	10186002	NELAP	LA
6270 - Fluorene	EPA 8270D	10186002	NELAP	LA
6275 - Hexachlorobenzene	EPA 8270D	10186002	NELAP	LA
6285 - Hexachlorocyclopentadiene	EPA 8270D	10186002	NELAP	LA
4840 - Hexachloroethane	EPA 8270D	10186002	NELAP	LA
6295 - Hexachloropropene	EPA 8270D	10186002	NELAP	LA
6315 - Indeno(1,2,3-cd)pyrene	EPA 8270D	10186002	NELAP	LA
6320 - Isophorone	EPA 8270D	10186002	NELAP	LA
6325 - Isosafrole	EPA 8270D	10186002	NELAP	LA
6375 - Methyl methanesulfonate	EPA 8270D	10186002	NELAP	LA
5005 - Naphthalene	EPA 8270D	10186002	NELAP	LA
6590 - Pentachlorobenzene	EPA 8270D	10186002	NELAP	LA
5035 - Pentachloroethane	EPA 8270D	10186002	NELAP	LA
6600 - Pentachloronitrobenzene	EPA 8270D	10186002	NELAP	LA
6605 - Pentachlorophenol	EPA 8270D	10186002	NELAP	LA
6610 - Phenacetin	EPA 8270D	10186002	NELAP	LA
6615 - Phenanthrene	EPA 8270D	10186002	NELAP	LA
6625 - Phenol	EPA 8270D	10186002	NELAP	LA
6665 - Pyrene	EPA 8270D	10186002	NELAP	LA
6685 - Safrole	EPA 8270D	10186002	NELAP	LA
5760 - bis(2-Chloroethoxy)methane	EPA 8270D	10186002	NELAP	LA
5765 - bis(2-Chloroethyl) ether	EPA 8270D	10186002	NELAP	LA
5025 - n-Nitroso-di-n-butylamine	EPA 8270D	10186002	NELAP	LA
6545 - n-Nitrosodi-n-propylamine	EPA 8270D	10186002	NELAP	LA
6525 - n-Nitrosodiethylamine	EPA 8270D	10186002	NELAP	LA
6530 - n-Nitrosodimethylamine	EPA 8270D	10186002	NELAP	LA
6535 - n-Nitrosodiphenylamine	EPA 8270D	10186002	NELAP	LA
6550 - n-Nitrosomethylethylamine	EPA 8270D	10186002	NELAP	LA
6555 - n-Nitrosomorpholine	EPA 8270D	10186002	NELAP	LA
6560 - n-Nitrosopiperidine	EPA 8270D	10186002	NELAP	LA
6565 - n-Nitrosopyrrolidine	EPA 8270D	10186002	NELAP	LA
6105 - p-Dimethylaminoazobenzene	EPA 8270D	10186002	NELAP	LA
9519 - 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290	10187209	NELAP	LA
9516 - 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290	10187209	NELAP	LA
9426 - 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	EPA 8290	10187209	NELAP	LA
9420 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	EPA 8290	10187209	NELAP	LA
9423 - 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	EPA 8290	10187209	NELAP	LA
9453 - 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	EPA 8290	10187209	NELAP	LA
9471 - 1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	EPA 8290	10187209	NELAP	LA
9456 - 1,2,3,6,7,8-Hexachlorodibenzo-p-	EPA 8290	10187209	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
dioxin(1,2,3,6,7,8-Hxcdd)				
9474 - 1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	EPA 8290	10187209	NELAP	LA
9459 - 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	EPA 8290	10187209	NELAP	LA
9477 - 1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	EPA 8290	10187209	NELAP	LA
9540 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	EPA 8290	10187209	NELAP	LA
9543 - 1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	EPA 8290	10187209	NELAP	LA
9480 - 2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 8290	10187209	NELAP	LA
9549 - 2,3,4,7,8-Pentachlorodibenzofuran	EPA 8290	10187209	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA 8290	10187209	NELAP	LA
9612 - 2,3,7,8-Tetrachlorodibenzofuran	EPA 8290	10187209	NELAP	LA
9438 - Total Hpcdd	EPA 8290	10187209	NELAP	LA
9444 - Total Hpcdf	EPA 8290	10187209	NELAP	LA
9468 - Total Hxcdd	EPA 8290	10187209	NELAP	LA
9483 - Total Hxcdf	EPA 8290	10187209	NELAP	LA
9555 - Total Pecdd	EPA 8290	10187209	NELAP	LA
9552 - Total Pecdf	EPA 8290	10187209	NELAP	LA
9609 - Total TCDD	EPA 8290	10187209	NELAP	LA
9615 - Total TCDF	EPA 8290	10187209	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA 1613B	10257600	NELAP	LA
9105 - 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (BZ-209)	EPA 1668C	10262109	NELAP	LA
9095 - 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ-206)	EPA 1668C	10262109	NELAP	LA
9090 - 2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ-194)	EPA 1668C	10262109	NELAP	LA
9102 - 2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ-196)	EPA 1668C	10262109	NELAP	LA
9101 - 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ-207)	EPA 1668C	10262109	NELAP	LA
9103 - 2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ-195)	EPA 1668C	10262109	NELAP	LA
9065 - 2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ-170)	EPA 1668C	10262109	NELAP	LA
9104 - 2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ-197)	EPA 1668C	10262109	NELAP	LA
9106 - 2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ-171)	EPA 1668C	10262109	NELAP	LA
9020 - 2,2',3,3',4,4'-Hexachlorobiphenyl (BZ-128)	EPA 1668C	10262109	NELAP	LA
9114 - 2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ-177)	EPA 1668C	10262109	NELAP	LA
9112 - 2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ-201)	EPA 1668C	10262109	NELAP	LA
9115 - 2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ-175)	EPA 1668C	10262109	NELAP	LA
9117 - 2,2',3,3',4,5'-Hexachlorobiphenyl (BZ-130)	EPA 1668C	10262109	NELAP	LA
9108 - 2,2',3,3',4,5,5',6'-Octachlorobiphenyl	EPA 1668C	10262109	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
(BZ-199)				
9107 - 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ-208)	EPA 1668C	10262109	NELAP	LA
9109 - 2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ-198)	EPA 1668C	10262109	NELAP	LA
9110 - 2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ-172)	EPA 1668C	10262109	NELAP	LA
9116 - 2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ-174)	EPA 1668C	10262109	NELAP	LA
9111 - 2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ-200)	EPA 1668C	10262109	NELAP	LA
9113 - 2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ-173)	EPA 1668C	10262109	NELAP	LA
9118 - 2,2',3,3',4,5-Hexachlorobiphenyl (BZ-129)	EPA 1668C	10262109	NELAP	LA
9120 - 2,2',3,3',4,6'-Hexachlorobiphenyl (BZ-132)	EPA 1668C	10262109	NELAP	LA
9119 - 2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ-176)	EPA 1668C	10262109	NELAP	LA
9121 - 2,2',3,3',4,6-Hexachlorobiphenyl (BZ-131)	EPA 1668C	10262109	NELAP	LA
9122 - 2,2',3,3',4-Pentachlorobiphenyl (BZ-82)	EPA 1668C	10262109	NELAP	LA
9123 - 2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ-202)	EPA 1668C	10262109	NELAP	LA
9124 - 2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ-178)	EPA 1668C	10262109	NELAP	LA
9125 - 2,2',3,3',5,5'-Hexachlorobiphenyl (BZ-133)	EPA 1668C	10262109	NELAP	LA
9127 - 2,2',3,3',5,6'-Hexachlorobiphenyl (BZ-135)	EPA 1668C	10262109	NELAP	LA
9126 - 2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ-179)	EPA 1668C	10262109	NELAP	LA
9128 - 2,2',3,3',5,6-Hexachlorobiphenyl (BZ-134)	EPA 1668C	10262109	NELAP	LA
9129 - 2,2',3,3',5-Pentachlorobiphenyl (BZ-83)	EPA 1668C	10262109	NELAP	LA
9130 - 2,2',3,3',6,6'-Hexachlorobiphenyl (BZ-136)	EPA 1668C	10262109	NELAP	LA
9131 - 2,2',3,3',6-Pentachlorobiphenyl (BZ-84)	EPA 1668C	10262109	NELAP	LA
9132 - 2,2',3,3'-Tetrachlorobiphenyl (BZ-40)	EPA 1668C	10262109	NELAP	LA
9151 - 2,2',3,4',5',6-Hexachlorobiphenyl (BZ-149)	EPA 1668C	10262109	NELAP	LA
9154 - 2,2',3,4',5'-Pentachlorobiphenyl (BZ-97)	EPA 1668C	10262109	NELAP	LA
9080 - 2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ-187)	EPA 1668C	10262109	NELAP	LA
9144 - 2,2',3,4',5,5'-Hexachlorobiphenyl (BZ-146)	EPA 1668C	10262109	NELAP	LA
9147 - 2,2',3,4',5,6'-Hexachlorobiphenyl (BZ-148)	EPA 1668C	10262109	NELAP	LA
9146 - 2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ-188)	EPA 1668C	10262109	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
9149 - 2,2',3,4',5,6-Hexachlorobiphenyl (BZ-147)	EPA 1668C	10262109	NELAP	LA
9155 - 2,2',3,4',5-Pentachlorobiphenyl (BZ-90)	EPA 1668C	10262109	NELAP	LA
9159 - 2,2',3,4',6'-Pentachlorobiphenyl (BZ-98)	EPA 1668C	10262109	NELAP	LA
9157 - 2,2',3,4',6,6'-Hexachlorobiphenyl (BZ-150)	EPA 1668C	10262109	NELAP	LA
9160 - 2,2',3,4',6-Pentachlorobiphenyl (BZ-91)	EPA 1668C	10262109	NELAP	LA
9162 - 2,2',3,4'-Tetrachlorobiphenyl (BZ-42)	EPA 1668C	10262109	NELAP	LA
9075 - 2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ-183)	EPA 1668C	10262109	NELAP	LA
9025 - 2,2',3,4,4',5'-Hexachlorobiphenyl (BZ-138)	EPA 1668C	10262109	NELAP	LA
9133 - 2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ-203)	EPA 1668C	10262109	NELAP	LA
9134 - 2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ-180)	EPA 1668C	10262109	NELAP	LA
9136 - 2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ-182)	EPA 1668C	10262109	NELAP	LA
9135 - 2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ-204)	EPA 1668C	10262109	NELAP	LA
9137 - 2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ-181)	EPA 1668C	10262109	NELAP	LA
9138 - 2,2',3,4,4',5-Hexachlorobiphenyl (BZ-137)	EPA 1668C	10262109	NELAP	LA
9140 - 2,2',3,4,4',6'-Hexachlorobiphenyl (BZ-140)	EPA 1668C	10262109	NELAP	LA
9139 - 2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ-184)	EPA 1668C	10262109	NELAP	LA
9141 - 2,2',3,4,4',6-Hexachlorobiphenyl (BZ-139)	EPA 1668C	10262109	NELAP	LA
9142 - 2,2',3,4,4'-Pentachlorobiphenyl (BZ-85)	EPA 1668C	10262109	NELAP	LA
9150 - 2,2',3,4,5',6-Hexachlorobiphenyl (BZ-144)	EPA 1668C	10262109	NELAP	LA
8975 - 2,2',3,4,5'-Pentachlorobiphenyl (BZ-87)	EPA 1668C	10262109	NELAP	LA
9143 - 2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ-185)	EPA 1668C	10262109	NELAP	LA
9030 - 2,2',3,4,5,5'-Hexachlorobiphenyl (BZ-141)	EPA 1668C	10262109	NELAP	LA
9152 - 2,2',3,4,5,6'-Hexachlorobiphenyl (BZ-143)	EPA 1668C	10262109	NELAP	LA
9145 - 2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ-186)	EPA 1668C	10262109	NELAP	LA
9148 - 2,2',3,4,5,6-Hexachlorobiphenyl (BZ-142)	EPA 1668C	10262109	NELAP	LA
9153 - 2,2',3,4,5-Pentachlorobiphenyl (BZ-86)	EPA 1668C	10262109	NELAP	LA
9161 - 2,2',3,4,6'-Pentachlorobiphenyl (BZ-89)	EPA 1668C	10262109	NELAP	LA
9156 - 2,2',3,4,6,6'-Hexachlorobiphenyl	EPA 1668C	10262109	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
(BZ-145)				
9158 - 2,2',3,4,6-Pentachlorobiphenyl (BZ-88)	EPA 1668C	10262109	NELAP	LA
9163 - 2,2',3,4-Tetrachlorobiphenyl (BZ-41)	EPA 1668C	10262109	NELAP	LA
9166 - 2,2',3,5',6-Pentachlorobiphenyl (BZ-95)	EPA 1668C	10262109	NELAP	LA
8945 - 2,2',3,5'-Tetrachlorobiphenyl (BZ-44)	EPA 1668C	10262109	NELAP	LA
9035 - 2,2',3,5,5',6-Hexachlorobiphenyl (BZ-151)	EPA 1668C	10262109	NELAP	LA
9164 - 2,2',3,5,5'-Pentachlorobiphenyl (BZ-92)	EPA 1668C	10262109	NELAP	LA
9167 - 2,2',3,5,6'-Pentachlorobiphenyl (BZ-94)	EPA 1668C	10262109	NELAP	LA
9165 - 2,2',3,5,6,6'-Hexachlorobiphenyl (BZ-152)	EPA 1668C	10262109	NELAP	LA
9168 - 2,2',3,5,6-Pentachlorobiphenyl (BZ-93)	EPA 1668C	10262109	NELAP	LA
9169 - 2,2',3,5-Tetrachlorobiphenyl (BZ-43)	EPA 1668C	10262109	NELAP	LA
9171 - 2,2',3,6'-Tetrachlorobiphenyl (BZ-46)	EPA 1668C	10262109	NELAP	LA
9170 - 2,2',3,6,6'-Pentachlorobiphenyl (BZ-96)	EPA 1668C	10262109	NELAP	LA
9172 - 2,2',3,6-Tetrachlorobiphenyl (BZ-45)	EPA 1668C	10262109	NELAP	LA
9173 - 2,2',3-Trichlorobiphenyl (BZ-16)	EPA 1668C	10262109	NELAP	LA
9040 - 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ-153)	EPA 1668C	10262109	NELAP	LA
9174 - 2,2',4,4',5,6'-Hexachlorobiphenyl (BZ-154)	EPA 1668C	10262109	NELAP	LA
9175 - 2,2',4,4',5-Pentachlorobiphenyl (BZ-99)	EPA 1668C	10262109	NELAP	LA
9176 - 2,2',4,4',6,6'-Hexachlorobiphenyl (BZ-155)	EPA 1668C	10262109	NELAP	LA
9177 - 2,2',4,4',6-Pentachlorobiphenyl (BZ-100)	EPA 1668C	10262109	NELAP	LA
9178 - 2,2',4,4'-Tetrachlorobiphenyl (BZ-47)	EPA 1668C	10262109	NELAP	LA
9179 - 2,2',4,5',6-Pentachlorobiphenyl (BZ-103)	EPA 1668C	10262109	NELAP	LA
8950 - 2,2',4,5'-Tetrachlorobiphenyl (BZ-49)	EPA 1668C	10262109	NELAP	LA
8980 - 2,2',4,5,5'-Pentachlorobiphenyl (BZ-101)	EPA 1668C	10262109	NELAP	LA
9180 - 2,2',4,5,6'-Pentachlorobiphenyl (BZ-102)	EPA 1668C	10262109	NELAP	LA
9181 - 2,2',4,5-Tetrachlorobiphenyl (BZ-48)	EPA 1668C	10262109	NELAP	LA
9183 - 2,2',4,6'-Tetrachlorobiphenyl (BZ-51)	EPA 1668C	10262109	NELAP	LA
9182 - 2,2',4,6,6'-Pentachlorobiphenyl (BZ-104)	EPA 1668C	10262109	NELAP	LA
9184 - 2,2',4,6-Tetrachlorobiphenyl (BZ-	EPA 1668C	10262109	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
50)				
9185 - 2,2',4-Trichlorobiphenyl (BZ-17)	EPA 1668C	10262109	NELAP	LA
8955 - 2,2',5,5'-Tetrachlorobiphenyl (BZ-52)	EPA 1668C	10262109	NELAP	LA
9186 - 2,2',5,6'-Tetrachlorobiphenyl (BZ-53)	EPA 1668C	10262109	NELAP	LA
8930 - 2,2',5-Trichlorobiphenyl (BZ-18)	EPA 1668C	10262109	NELAP	LA
9187 - 2,2',6,6'-Tetrachlorobiphenyl (BZ-54)	EPA 1668C	10262109	NELAP	LA
9188 - 2,2',6-Trichlorobiphenyl (BZ-19)	EPA 1668C	10262109	NELAP	LA
9189 - 2,2'-Dichlorobiphenyl (BZ-4)	EPA 1668C	10262109	NELAP	LA
9224 - 2,3',4',5',6-Pentachlorobiphenyl (BZ-125)	EPA 1668C	10262109	NELAP	LA
9229 - 2,3',4',5'-Tetrachlorobiphenyl (BZ-76)	EPA 1668C	10262109	NELAP	LA
9222 - 2,3',4',5,5'-Pentachlorobiphenyl (BZ-124)	EPA 1668C	10262109	NELAP	LA
9230 - 2,3',4',5-Tetrachlorobiphenyl (BZ-70)	EPA 1668C	10262109	NELAP	LA
9237 - 2,3',4',6-Tetrachlorobiphenyl (BZ-71)	EPA 1668C	10262109	NELAP	LA
9239 - 2,3',4'-Trichlorobiphenyl (BZ-33)	EPA 1668C	10262109	NELAP	LA
9218 - 2,3',4,4',5',6-Hexachlorobiphenyl (BZ-168)	EPA 1668C	10262109	NELAP	LA
9011 - 2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	EPA 1668C	10262109	NELAP	LA
9000 - 2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	EPA 1668C	10262109	NELAP	LA
9055 - 2,3',4,4',5,5'-Hexachlorobiphenyl (BZ-167)	EPA 1668C	10262109	NELAP	LA
8995 - 2,3',4,4',5-Pentachlorobiphenyl (BZ-118)	EPA 1668C	10262109	NELAP	LA
9220 - 2,3',4,4',6-Pentachlorobiphenyl (BZ-119)	EPA 1668C	10262109	NELAP	LA
8960 - 2,3',4,4'-Tetrachlorobiphenyl (BZ-66)	EPA 1668C	10262109	NELAP	LA
9226 - 2,3',4,5',6-Pentachlorobiphenyl (BZ-121)	EPA 1668C	10262109	NELAP	LA
9231 - 2,3',4,5'-Tetrachlorobiphenyl (BZ-68)	EPA 1668C	10262109	NELAP	LA
9223 - 2,3',4,5,5'-Pentachlorobiphenyl (BZ-120)	EPA 1668C	10262109	NELAP	LA
9232 - 2,3',4,5-Tetrachlorobiphenyl (BZ-67)	EPA 1668C	10262109	NELAP	LA
9235 - 2,3',4,6-Tetrachlorobiphenyl (BZ-69)	EPA 1668C	10262109	NELAP	LA
9240 - 2,3',4-Trichlorobiphenyl (BZ-25)	EPA 1668C	10262109	NELAP	LA
9244 - 2,3',5',6-Tetrachlorobiphenyl (BZ-73)	EPA 1668C	10262109	NELAP	LA
9246 - 2,3',5'-Trichlorobiphenyl (BZ-34)	EPA 1668C	10262109	NELAP	LA
9242 - 2,3',5,5'-Tetrachlorobiphenyl (BZ-72)	EPA 1668C	10262109	NELAP	LA
8935 - 2,3',5-Trichlorobiphenyl (BZ-26)	EPA 1668C	10262109	NELAP	LA
9248 - 2,3',6-Trichlorobiphenyl (BZ-27)	EPA 1668C	10262109	NELAP	LA
9249 - 2,3'-Dichlorobiphenyl (BZ-6)	EPA 1668C	10262109	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
9201 - 2,3,3',4',5',6-Hexachlorobiphenyl (BZ-164)	EPA 1668C	10262109	NELAP	LA
9202 - 2,3,3',4',5'-Pentachlorobiphenyl (BZ-122)	EPA 1668C	10262109	NELAP	LA
9195 - 2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ-193)	EPA 1668C	10262109	NELAP	LA
9197 - 2,3,3',4',5,5'-Hexachlorobiphenyl (BZ-162)	EPA 1668C	10262109	NELAP	LA
9199 - 2,3,3',4',5,6-Hexachlorobiphenyl (BZ-163)	EPA 1668C	10262109	NELAP	LA
9205 - 2,3,3',4',5-Pentachlorobiphenyl (BZ-107)	EPA 1668C	10262109	NELAP	LA
8990 - 2,3,3',4',6-Pentachlorobiphenyl (BZ-110)	EPA 1668C	10262109	NELAP	LA
9207 - 2,3,3',4'-Tetrachlorobiphenyl (BZ-56)	EPA 1668C	10262109	NELAP	LA
9192 - 2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ-191)	EPA 1668C	10262109	NELAP	LA
9045 - 2,3,3',4,4',5'-Hexachlorobiphenyl (BZ-157)	EPA 1668C	10262109	NELAP	LA
9190 - 2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ-205)	EPA 1668C	10262109	NELAP	LA
9085 - 2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ-189)	EPA 1668C	10262109	NELAP	LA
9191 - 2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ-190)	EPA 1668C	10262109	NELAP	LA
9050 - 2,3,3',4,4',5-Hexachlorobiphenyl (BZ-156)	EPA 1668C	10262109	NELAP	LA
9193 - 2,3,3',4,4',6-Hexachlorobiphenyl (BZ-158)	EPA 1668C	10262109	NELAP	LA
8985 - 2,3,3',4,4'-Pentachlorobiphenyl (BZ-105)	EPA 1668C	10262109	NELAP	LA
9200 - 2,3,3',4,5',6-Hexachlorobiphenyl (BZ-161)	EPA 1668C	10262109	NELAP	LA
9203 - 2,3,3',4,5'-Pentachlorobiphenyl (BZ-108)	EPA 1668C	10262109	NELAP	LA
9194 - 2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ-192)	EPA 1668C	10262109	NELAP	LA
9196 - 2,3,3',4,5,5'-Hexachlorobiphenyl (BZ-159)	EPA 1668C	10262109	NELAP	LA
9198 - 2,3,3',4,5,6-Hexachlorobiphenyl (BZ-160)	EPA 1668C	10262109	NELAP	LA
9204 - 2,3,3',4,5-Pentachlorobiphenyl (BZ-106)	EPA 1668C	10262109	NELAP	LA
9206 - 2,3,3',4,6-Pentachlorobiphenyl (BZ-109)	EPA 1668C	10262109	NELAP	LA
9208 - 2,3,3',4-Tetrachlorobiphenyl (BZ-55)	EPA 1668C	10262109	NELAP	LA
9212 - 2,3,3',5',6-Pentachlorobiphenyl (BZ-113)	EPA 1668C	10262109	NELAP	LA
9213 - 2,3,3',5'-Tetrachlorobiphenyl (BZ-58)	EPA 1668C	10262109	NELAP	LA
9209 - 2,3,3',5,5',6-Hexachlorobiphenyl (BZ-165)	EPA 1668C	10262109	NELAP	LA
9210 - 2,3,3',5,5'-Pentachlorobiphenyl	EPA 1668C	10262109	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
(BZ-111)				
9211 - 2,3',3',5,6-Pentachlorobiphenyl (BZ-112)	EPA 1668C	10262109	NELAP	LA
9214 - 2,3,3',5-Tetrachlorobiphenyl (BZ-57)	EPA 1668C	10262109	NELAP	LA
9215 - 2,3,3',6-Tetrachlorobiphenyl (BZ-59)	EPA 1668C	10262109	NELAP	LA
9216 - 2,3',3'-Trichlorobiphenyl (BZ-20)	EPA 1668C	10262109	NELAP	LA
9227 - 2,3',4',5,6-Pentachlorobiphenyl (BZ-117)	EPA 1668C	10262109	NELAP	LA
9233 - 2,3,4',5-Tetrachlorobiphenyl (BZ-63)	EPA 1668C	10262109	NELAP	LA
9236 - 2,3,4',6-Tetrachlorobiphenyl (BZ-64)	EPA 1668C	10262109	NELAP	LA
9241 - 2,3',4'-Trichlorobiphenyl (BZ-22)	EPA 1668C	10262109	NELAP	LA
9217 - 2,3,4,4',5,6-Hexachlorobiphenyl (BZ-166)	EPA 1668C	10262109	NELAP	LA
9005 - 2,3',4,4',5-Pentachlorobiphenyl (BZ-114)	EPA 1668C	10262109	NELAP	LA
9219 - 2,3',4,4',6-Pentachlorobiphenyl (BZ-115)	EPA 1668C	10262109	NELAP	LA
9221 - 2,3,4,4'-Tetrachlorobiphenyl (BZ-60)	EPA 1668C	10262109	NELAP	LA
9225 - 2,3',4,5,6-Pentachlorobiphenyl (BZ-116)	EPA 1668C	10262109	NELAP	LA
9228 - 2,3,4,5-Tetrachlorobiphenyl (BZ-61)	EPA 1668C	10262109	NELAP	LA
9234 - 2,3,4,6-Tetrachlorobiphenyl (BZ-62)	EPA 1668C	10262109	NELAP	LA
9238 - 2,3',4-Trichlorobiphenyl (BZ-21)	EPA 1668C	10262109	NELAP	LA
9243 - 2,3,5,6-Tetrachlorobiphenyl (BZ-65)	EPA 1668C	10262109	NELAP	LA
9245 - 2,3',5-Trichlorobiphenyl (BZ-23)	EPA 1668C	10262109	NELAP	LA
9247 - 2,3',6-Trichlorobiphenyl (BZ-24)	EPA 1668C	10262109	NELAP	LA
8920 - 2,3-Dichlorobiphenyl (BZ-5)	EPA 1668C	10262109	NELAP	LA
8940 - 2,4',5-Trichlorobiphenyl (BZ-31)	EPA 1668C	10262109	NELAP	LA
9255 - 2,4',6-Trichlorobiphenyl (BZ-32)	EPA 1668C	10262109	NELAP	LA
9256 - 2,4'-Dichlorobiphenyl (BZ-8)	EPA 1668C	10262109	NELAP	LA
9250 - 2,4,4',5-Tetrachlorobiphenyl (BZ-74)	EPA 1668C	10262109	NELAP	LA
9251 - 2,4,4',6-Tetrachlorobiphenyl (BZ-75)	EPA 1668C	10262109	NELAP	LA
9252 - 2,4,4'-Trichlorobiphenyl (BZ-28)	EPA 1668C	10262109	NELAP	LA
9253 - 2,4,5-Trichlorobiphenyl (BZ-29)	EPA 1668C	10262109	NELAP	LA
9254 - 2,4,6-Trichlorobiphenyl (BZ-30)	EPA 1668C	10262109	NELAP	LA
9257 - 2,4-Dichlorobiphenyl (BZ-7)	EPA 1668C	10262109	NELAP	LA
9258 - 2,5-Dichlorobiphenyl (BZ-9)	EPA 1668C	10262109	NELAP	LA
9259 - 2,6-Dichlorobiphenyl (BZ-10)	EPA 1668C	10262109	NELAP	LA
8915 - 2-Chlorobiphenyl (BZ-1)	EPA 1668C	10262109	NELAP	LA
9060 - 3,3',4,4',5,5'-Hexachlorobiphenyl (BZ-169)	EPA 1668C	10262109	NELAP	LA
9015 - 3,3',4,4',5-Pentachlorobiphenyl (BZ-126)	EPA 1668C	10262109	NELAP	LA
8965 - 3,3',4,4'-Tetrachlorobiphenyl (BZ-77)	EPA 1668C	10262109	NELAP	LA

Solid Chemical Materials

Analyte	Method Name	Method Code	Type	AB
9261 - 3,3',4,5'-Tetrachlorobiphenyl (BZ-79)	EPA 1668C	10262109	NELAP	LA
9260 - 3,3',4,5,5'-Pentachlorobiphenyl (BZ-127)	EPA 1668C	10262109	NELAP	LA
9262 - 3,3',4,5-Tetrachlorobiphenyl (BZ-78)	EPA 1668C	10262109	NELAP	LA
9263 - 3,3',4-Trichlorobiphenyl (BZ-35)	EPA 1668C	10262109	NELAP	LA
9264 - 3,3',5,5'-Tetrachlorobiphenyl (BZ-80)	EPA 1668C	10262109	NELAP	LA
9265 - 3,3',5-Trichlorobiphenyl (BZ-36)	EPA 1668C	10262109	NELAP	LA
8925 - 3,3'-Dichlorobiphenyl (BZ-11)	EPA 1668C	10262109	NELAP	LA
9268 - 3,4',5-Trichlorobiphenyl (BZ-39)	EPA 1668C	10262109	NELAP	LA
9269 - 3,4'-Dichlorobiphenyl (BZ-13)	EPA 1668C	10262109	NELAP	LA
8970 - 3,4,4',5-Tetrachlorobiphenyl (BZ-81)	EPA 1668C	10262109	NELAP	LA
9266 - 3,4,4'-Trichlorobiphenyl (BZ-37)	EPA 1668C	10262109	NELAP	LA
9267 - 3,4,5-Trichlorobiphenyl (BZ-38)	EPA 1668C	10262109	NELAP	LA
9270 - 3,4-Dichlorobiphenyl (BZ-12)	EPA 1668C	10262109	NELAP	LA
9271 - 3,5-Dichlorobiphenyl (BZ-14)	EPA 1668C	10262109	NELAP	LA
9272 - 3-Chlorobiphenyl (BZ-2)	EPA 1668C	10262109	NELAP	LA
9273 - 4,4'-Dichlorobiphenyl (BZ-15)	EPA 1668C	10262109	NELAP	LA
9274 - 4-Chlorobiphenyl (BZ-3)	EPA 1668C	10262109	NELAP	LA

Biological Tissue

Analyte	Method Name	Method Code	Type	AB
9519 - 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 1613B	10120602	NELAP	LA
9516 - 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 1613B	10120602	NELAP	LA
9426 - 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	EPA 1613B	10120602	NELAP	LA
9420 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	EPA 1613B	10120602	NELAP	LA
9423 - 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	EPA 1613B	10120602	NELAP	LA
9453 - 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	EPA 1613B	10120602	NELAP	LA
9471 - 1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	EPA 1613B	10120602	NELAP	LA
9456 - 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	EPA 1613B	10120602	NELAP	LA
9474 - 1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	EPA 1613B	10120602	NELAP	LA
9459 - 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	EPA 1613B	10120602	NELAP	LA
9477 - 1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	EPA 1613B	10120602	NELAP	LA
9540 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	EPA 1613B	10120602	NELAP	LA
9543 - 1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	EPA 1613B	10120602	NELAP	LA

Biological Tissue

Analyte	Method Name	Method Code	Type	AB
9480 - 2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 1613B	10120602	NELAP	LA
9549 - 2,3,4,7,8-Pentachlorodibenzofuran	EPA 1613B	10120602	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA 1613B	10120602	NELAP	LA
9612 - 2,3,7,8-Tetrachlorodibenzofuran	EPA 1613B	10120602	NELAP	LA
9438 - Total Hpcdd	EPA 1613B	10120602	NELAP	LA
9444 - Total Hpcdf	EPA 1613B	10120602	NELAP	LA
9468 - Total Hxcdd	EPA 1613B	10120602	NELAP	LA
9483 - Total Hxcdf	EPA 1613B	10120602	NELAP	LA
9555 - Total Pecdd	EPA 1613B	10120602	NELAP	LA
9552 - Total Pecdf	EPA 1613B	10120602	NELAP	LA
9609 - Total TCDD	EPA 1613B	10120602	NELAP	LA
9615 - Total TCDF	EPA 1613B	10120602	NELAP	LA
9105 - 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (BZ-209)	EPA 1668A	10129405	NELAP	LA
9095 - 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ-206)	EPA 1668A	10129405	NELAP	LA
9090 - 2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ-194)	EPA 1668A	10129405	NELAP	LA
9102 - 2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ-196)	EPA 1668A	10129405	NELAP	LA
9101 - 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ-207)	EPA 1668A	10129405	NELAP	LA
9103 - 2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ-195)	EPA 1668A	10129405	NELAP	LA
9065 - 2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ-170)	EPA 1668A	10129405	NELAP	LA
9104 - 2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ-197)	EPA 1668A	10129405	NELAP	LA
9106 - 2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ-171)	EPA 1668A	10129405	NELAP	LA
9020 - 2,2',3,3',4,4'-Hexachlorobiphenyl (BZ-128)	EPA 1668A	10129405	NELAP	LA
9114 - 2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ-177)	EPA 1668A	10129405	NELAP	LA
9112 - 2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ-201)	EPA 1668A	10129405	NELAP	LA
9115 - 2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ-175)	EPA 1668A	10129405	NELAP	LA
9117 - 2,2',3,3',4,5'-Hexachlorobiphenyl (BZ-130)	EPA 1668A	10129405	NELAP	LA
9108 - 2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ-199)	EPA 1668A	10129405	NELAP	LA
9107 - 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ-208)	EPA 1668A	10129405	NELAP	LA
9109 - 2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ-198)	EPA 1668A	10129405	NELAP	LA
9110 - 2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ-172)	EPA 1668A	10129405	NELAP	LA
9116 - 2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ-174)	EPA 1668A	10129405	NELAP	LA
9111 - 2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ-200)	EPA 1668A	10129405	NELAP	LA
9113 - 2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ-173)	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9118 - 2,2',3,3',4,5-Hexachlorobiphenyl (BZ-129)	EPA 1668A	10129405	NELAP	LA
9120 - 2,2',3,3',4,6'-Hexachlorobiphenyl (BZ-132)	EPA 1668A	10129405	NELAP	LA
9119 - 2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ-176)	EPA 1668A	10129405	NELAP	LA
9121 - 2,2',3,3',4,6-Hexachlorobiphenyl (BZ-131)	EPA 1668A	10129405	NELAP	LA
9122 - 2,2',3,3',4-Pentachlorobiphenyl (BZ-82)	EPA 1668A	10129405	NELAP	LA
9123 - 2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ-202)	EPA 1668A	10129405	NELAP	LA
9124 - 2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ-178)	EPA 1668A	10129405	NELAP	LA
9125 - 2,2',3,3',5,5'-Hexachlorobiphenyl (BZ-133)	EPA 1668A	10129405	NELAP	LA
9127 - 2,2',3,3',5,6'-Hexachlorobiphenyl (BZ-135)	EPA 1668A	10129405	NELAP	LA
9126 - 2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ-179)	EPA 1668A	10129405	NELAP	LA
9128 - 2,2',3,3',5,6-Hexachlorobiphenyl (BZ-134)	EPA 1668A	10129405	NELAP	LA
9129 - 2,2',3,3',5-Pentachlorobiphenyl (BZ-83)	EPA 1668A	10129405	NELAP	LA
9130 - 2,2',3,3',6,6'-Hexachlorobiphenyl (BZ-136)	EPA 1668A	10129405	NELAP	LA
9131 - 2,2',3,3',6-Pentachlorobiphenyl (BZ-84)	EPA 1668A	10129405	NELAP	LA
9132 - 2,2',3,3'-Tetrachlorobiphenyl (BZ-40)	EPA 1668A	10129405	NELAP	LA
9151 - 2,2',3,4',5',6-Hexachlorobiphenyl (BZ-149)	EPA 1668A	10129405	NELAP	LA
9154 - 2,2',3,4',5'-Pentachlorobiphenyl (BZ-97)	EPA 1668A	10129405	NELAP	LA
9080 - 2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ-187)	EPA 1668A	10129405	NELAP	LA
9144 - 2,2',3,4',5,5'-Hexachlorobiphenyl (BZ-146)	EPA 1668A	10129405	NELAP	LA
9147 - 2,2',3,4',5,6'-Hexachlorobiphenyl (BZ-148)	EPA 1668A	10129405	NELAP	LA
9146 - 2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ-188)	EPA 1668A	10129405	NELAP	LA
9149 - 2,2',3,4',5,6-Hexachlorobiphenyl (BZ-147)	EPA 1668A	10129405	NELAP	LA
9155 - 2,2',3,4',5-Pentachlorobiphenyl (BZ-90)	EPA 1668A	10129405	NELAP	LA
9159 - 2,2',3,4',6'-Pentachlorobiphenyl (BZ-98)	EPA 1668A	10129405	NELAP	LA
9157 - 2,2',3,4',6,6'-Hexachlorobiphenyl (BZ-150)	EPA 1668A	10129405	NELAP	LA
9160 - 2,2',3,4',6-Pentachlorobiphenyl (BZ-91)	EPA 1668A	10129405	NELAP	LA
9162 - 2,2',3,4'-Tetrachlorobiphenyl (BZ-42)	EPA 1668A	10129405	NELAP	LA
9075 - 2,2',3,4,4',5',6-Heptachlorobiphenyl	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
(BZ-183)				
9025 - 2,2',3,4,4',5'-Hexachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-138)				
9133 - 2,2',3,4,4',5,5',6-Octachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-203)				
9134 - 2,2',3,4,4',5,5'-Heptachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-180)				
9136 - 2,2',3,4,4',5,6'-Heptachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-182)				
9135 - 2,2',3,4,4',5,6,6'-Octachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-204)				
9137 - 2,2',3,4,4',5,6-Heptachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-181)				
9138 - 2,2',3,4,4',5-Hexachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-137)				
9140 - 2,2',3,4,4',6'-Hexachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-140)				
9139 - 2,2',3,4,4',6,6'-Heptachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-184)				
9141 - 2,2',3,4,4',6-Hexachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-139)				
9142 - 2,2',3,4,4'-Pentachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-85)				
9150 - 2,2',3,4,5',6-Hexachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-144)				
8975 - 2,2',3,4,5'-Pentachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-87)				
9143 - 2,2',3,4,5,5',6-Heptachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-185)				
9030 - 2,2',3,4,5,5'-Hexachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-141)				
9152 - 2,2',3,4,5,6'-Hexachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-143)				
9145 - 2,2',3,4,5,6,6'-Heptachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-186)				
9148 - 2,2',3,4,5,6-Hexachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-142)				
9153 - 2,2',3,4,5-Pentachlorobiphenyl (BZ-86)	EPA 1668A	10129405	NELAP	LA
9161 - 2,2',3,4,6'-Pentachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-89)				
9156 - 2,2',3,4,6,6'-Hexachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-145)				
9158 - 2,2',3,4,6-Pentachlorobiphenyl (BZ-88)	EPA 1668A	10129405	NELAP	LA
9163 - 2,2',3,4-Tetrachlorobiphenyl (BZ-41)	EPA 1668A	10129405	NELAP	LA
9166 - 2,2',3,5',6-Pentachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-95)				
8945 - 2,2',3,5'-Tetrachlorobiphenyl (BZ-44)	EPA 1668A	10129405	NELAP	LA
9035 - 2,2',3,5,5',6-Hexachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-151)				
9164 - 2,2',3,5,5'-Pentachlorobiphenyl	EPA 1668A	10129405	NELAP	LA
(BZ-92)				

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Analyte	Method Name	Method Code	Type	AB
9167 - 2,2',3,5,6'-Pentachlorobiphenyl (BZ-94)	EPA 1668A	10129405	NELAP	LA
9165 - 2,2',3,5,6,6'-Hexachlorobiphenyl (BZ-152)	EPA 1668A	10129405	NELAP	LA
9168 - 2,2',3,5,6-Pentachlorobiphenyl (BZ-93)	EPA 1668A	10129405	NELAP	LA
9169 - 2,2',3,5-Tetrachlorobiphenyl (BZ-43)	EPA 1668A	10129405	NELAP	LA
9171 - 2,2',3,6'-Tetrachlorobiphenyl (BZ-46)	EPA 1668A	10129405	NELAP	LA
9170 - 2,2',3,6,6'-Pentachlorobiphenyl (BZ-96)	EPA 1668A	10129405	NELAP	LA
9172 - 2,2',3,6-Tetrachlorobiphenyl (BZ-45)	EPA 1668A	10129405	NELAP	LA
9173 - 2,2',3-Trichlorobiphenyl (BZ-16)	EPA 1668A	10129405	NELAP	LA
9040 - 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ-153)	EPA 1668A	10129405	NELAP	LA
9174 - 2,2',4,4',5,6'-Hexachlorobiphenyl (BZ-154)	EPA 1668A	10129405	NELAP	LA
9175 - 2,2',4,4',5-Pentachlorobiphenyl (BZ-99)	EPA 1668A	10129405	NELAP	LA
9176 - 2,2',4,4',6,6'-Hexachlorobiphenyl (BZ-155)	EPA 1668A	10129405	NELAP	LA
9177 - 2,2',4,4',6-Pentachlorobiphenyl (BZ-100)	EPA 1668A	10129405	NELAP	LA
9178 - 2,2',4,4'-Tetrachlorobiphenyl (BZ-47)	EPA 1668A	10129405	NELAP	LA
9179 - 2,2',4,5',6-Pentachlorobiphenyl (BZ-103)	EPA 1668A	10129405	NELAP	LA
8950 - 2,2',4,5'-Tetrachlorobiphenyl (BZ-49)	EPA 1668A	10129405	NELAP	LA
8980 - 2,2',4,5,5'-Pentachlorobiphenyl (BZ-101)	EPA 1668A	10129405	NELAP	LA
9180 - 2,2',4,5,6'-Pentachlorobiphenyl (BZ-102)	EPA 1668A	10129405	NELAP	LA
9181 - 2,2',4,5-Tetrachlorobiphenyl (BZ-48)	EPA 1668A	10129405	NELAP	LA
9183 - 2,2',4,6'-Tetrachlorobiphenyl (BZ-51)	EPA 1668A	10129405	NELAP	LA
9182 - 2,2',4,6,6'-Pentachlorobiphenyl (BZ-104)	EPA 1668A	10129405	NELAP	LA
9184 - 2,2',4,6-Tetrachlorobiphenyl (BZ-50)	EPA 1668A	10129405	NELAP	LA
9185 - 2,2',4-Trichlorobiphenyl (BZ-17)	EPA 1668A	10129405	NELAP	LA
8955 - 2,2',5,5'-Tetrachlorobiphenyl (BZ-52)	EPA 1668A	10129405	NELAP	LA
9186 - 2,2',5,6'-Tetrachlorobiphenyl (BZ-53)	EPA 1668A	10129405	NELAP	LA
8930 - 2,2',5-Trichlorobiphenyl (BZ-18)	EPA 1668A	10129405	NELAP	LA
9187 - 2,2',6,6'-Tetrachlorobiphenyl (BZ-54)	EPA 1668A	10129405	NELAP	LA
9188 - 2,2',6-Trichlorobiphenyl (BZ-19)	EPA 1668A	10129405	NELAP	LA
9189 - 2,2'-Dichlorobiphenyl (BZ-4)	EPA 1668A	10129405	NELAP	LA
9224 - 2,3',4',5',6-Pentachlorobiphenyl (BZ-125)	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9229 - 2,3',4',5'-Tetrachlorobiphenyl (BZ-76)	EPA 1668A	10129405	NELAP	LA
9222 - 2,3',4',5,5'-Pentachlorobiphenyl (BZ-124)	EPA 1668A	10129405	NELAP	LA
9230 - 2,3',4',5-Tetrachlorobiphenyl (BZ-70)	EPA 1668A	10129405	NELAP	LA
9237 - 2,3',4',6-Tetrachlorobiphenyl (BZ-71)	EPA 1668A	10129405	NELAP	LA
9239 - 2,3',4'-Trichlorobiphenyl (BZ-33)	EPA 1668A	10129405	NELAP	LA
9218 - 2,3',4,4',5',6-Hexachlorobiphenyl (BZ-168)	EPA 1668A	10129405	NELAP	LA
9011 - 2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	EPA 1668A	10129405	NELAP	LA
9000 - 2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	EPA 1668A	10129405	NELAP	LA
9055 - 2,3',4,4',5,5'-Hexachlorobiphenyl (BZ-167)	EPA 1668A	10129405	NELAP	LA
8995 - 2,3',4,4',5-Pentachlorobiphenyl (BZ-118)	EPA 1668A	10129405	NELAP	LA
9220 - 2,3',4,4',6-Pentachlorobiphenyl (BZ-119)	EPA 1668A	10129405	NELAP	LA
8960 - 2,3',4,4'-Tetrachlorobiphenyl (BZ-66)	EPA 1668A	10129405	NELAP	LA
9226 - 2,3',4,5',6-Pentachlorobiphenyl (BZ-121)	EPA 1668A	10129405	NELAP	LA
9231 - 2,3',4,5'-Tetrachlorobiphenyl (BZ-68)	EPA 1668A	10129405	NELAP	LA
9223 - 2,3',4,5,5'-Pentachlorobiphenyl (BZ-120)	EPA 1668A	10129405	NELAP	LA
9232 - 2,3',4,5-Tetrachlorobiphenyl (BZ-67)	EPA 1668A	10129405	NELAP	LA
9235 - 2,3',4,6-Tetrachlorobiphenyl (BZ-69)	EPA 1668A	10129405	NELAP	LA
9240 - 2,3',4-Trichlorobiphenyl (BZ-25)	EPA 1668A	10129405	NELAP	LA
9244 - 2,3',5',6-Tetrachlorobiphenyl (BZ-73)	EPA 1668A	10129405	NELAP	LA
9246 - 2,3',5'-Trichlorobiphenyl (BZ-34)	EPA 1668A	10129405	NELAP	LA
9242 - 2,3',5,5'-Tetrachlorobiphenyl (BZ-72)	EPA 1668A	10129405	NELAP	LA
8935 - 2,3',5-Trichlorobiphenyl (BZ-26)	EPA 1668A	10129405	NELAP	LA
9248 - 2,3',6-Trichlorobiphenyl (BZ-27)	EPA 1668A	10129405	NELAP	LA
9249 - 2,3'-Dichlorobiphenyl (BZ-6)	EPA 1668A	10129405	NELAP	LA
9201 - 2,3,3',4',5',6-Hexachlorobiphenyl (BZ-164)	EPA 1668A	10129405	NELAP	LA
9202 - 2,3,3',4',5'-Pentachlorobiphenyl (BZ-122)	EPA 1668A	10129405	NELAP	LA
9195 - 2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ-193)	EPA 1668A	10129405	NELAP	LA
9197 - 2,3,3',4',5,5'-Hexachlorobiphenyl (BZ-162)	EPA 1668A	10129405	NELAP	LA
9199 - 2,3,3',4',5,6-Hexachlorobiphenyl (BZ-163)	EPA 1668A	10129405	NELAP	LA
9205 - 2,3,3',4',5-Pentachlorobiphenyl (BZ-107)	EPA 1668A	10129405	NELAP	LA
8990 - 2,3,3',4',6-Pentachlorobiphenyl	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
(BZ-110)				
9207 - 2,3,3',4'-Tetrachlorobiphenyl (BZ-56)	EPA 1668A	10129405	NELAP	LA
9192 - 2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ-191)	EPA 1668A	10129405	NELAP	LA
9045 - 2,3,3',4,4',5'-Hexachlorobiphenyl (BZ-157)	EPA 1668A	10129405	NELAP	LA
9190 - 2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ-205)	EPA 1668A	10129405	NELAP	LA
9085 - 2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ-189)	EPA 1668A	10129405	NELAP	LA
9191 - 2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ-190)	EPA 1668A	10129405	NELAP	LA
9050 - 2,3,3',4,4',5-Hexachlorobiphenyl (BZ-156)	EPA 1668A	10129405	NELAP	LA
9193 - 2,3,3',4,4',6-Hexachlorobiphenyl (BZ-158)	EPA 1668A	10129405	NELAP	LA
8985 - 2,3,3',4,4'-Pentachlorobiphenyl (BZ-105)	EPA 1668A	10129405	NELAP	LA
9200 - 2,3,3',4,5',6-Hexachlorobiphenyl (BZ-161)	EPA 1668A	10129405	NELAP	LA
9203 - 2,3,3',4,5'-Pentachlorobiphenyl (BZ-108)	EPA 1668A	10129405	NELAP	LA
9194 - 2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ-192)	EPA 1668A	10129405	NELAP	LA
9196 - 2,3,3',4,5,5'-Hexachlorobiphenyl (BZ-159)	EPA 1668A	10129405	NELAP	LA
9198 - 2,3,3',4,5,6-Hexachlorobiphenyl (BZ-160)	EPA 1668A	10129405	NELAP	LA
9204 - 2,3,3',4,5-Pentachlorobiphenyl (BZ-106)	EPA 1668A	10129405	NELAP	LA
9206 - 2,3,3',4,6-Pentachlorobiphenyl (BZ-109)	EPA 1668A	10129405	NELAP	LA
9208 - 2,3,3',4-Tetrachlorobiphenyl (BZ-55)	EPA 1668A	10129405	NELAP	LA
9212 - 2,3,3',5',6-Pentachlorobiphenyl (BZ-113)	EPA 1668A	10129405	NELAP	LA
9213 - 2,3,3',5'-Tetrachlorobiphenyl (BZ-58)	EPA 1668A	10129405	NELAP	LA
9209 - 2,3,3',5,5',6-Hexachlorobiphenyl (BZ-165)	EPA 1668A	10129405	NELAP	LA
9210 - 2,3,3',5,5'-Pentachlorobiphenyl (BZ-111)	EPA 1668A	10129405	NELAP	LA
9211 - 2,3,3',5,6-Pentachlorobiphenyl (BZ-112)	EPA 1668A	10129405	NELAP	LA
9214 - 2,3,3',5-Tetrachlorobiphenyl (BZ-57)	EPA 1668A	10129405	NELAP	LA
9215 - 2,3,3',6-Tetrachlorobiphenyl (BZ-59)	EPA 1668A	10129405	NELAP	LA
9216 - 2,3,3'-Trichlorobiphenyl (BZ-20)	EPA 1668A	10129405	NELAP	LA
9227 - 2,3,4',5,6-Pentachlorobiphenyl (BZ-117)	EPA 1668A	10129405	NELAP	LA
9233 - 2,3,4',5-Tetrachlorobiphenyl (BZ-63)	EPA 1668A	10129405	NELAP	LA
9236 - 2,3,4',6-Tetrachlorobiphenyl (BZ-	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
64)				
9241 - 2,3,4'-Trichlorobiphenyl (BZ-22)	EPA 1668A	10129405	NELAP	LA
9217 - 2,3,4,4',5,6-Hexachlorobiphenyl (BZ-166)	EPA 1668A	10129405	NELAP	LA
9005 - 2,3,4,4',5-Pentachlorobiphenyl (BZ-114)	EPA 1668A	10129405	NELAP	LA
9219 - 2,3,4,4',6-Pentachlorobiphenyl (BZ-115)	EPA 1668A	10129405	NELAP	LA
9221 - 2,3,4,4'-Tetrachlorobiphenyl (BZ-60)	EPA 1668A	10129405	NELAP	LA
9225 - 2,3,4,5,6-Pentachlorobiphenyl (BZ-116)	EPA 1668A	10129405	NELAP	LA
9228 - 2,3,4,5-Tetrachlorobiphenyl (BZ-61)	EPA 1668A	10129405	NELAP	LA
9234 - 2,3,4,6-Tetrachlorobiphenyl (BZ-62)	EPA 1668A	10129405	NELAP	LA
9238 - 2,3,4-Trichlorobiphenyl (BZ-21)	EPA 1668A	10129405	NELAP	LA
9243 - 2,3,5,6-Tetrachlorobiphenyl (BZ-65)	EPA 1668A	10129405	NELAP	LA
9245 - 2,3,5-Trichlorobiphenyl (BZ-23)	EPA 1668A	10129405	NELAP	LA
9247 - 2,3,6-Trichlorobiphenyl (BZ-24)	EPA 1668A	10129405	NELAP	LA
8920 - 2,3-Dichlorobiphenyl (BZ-5)	EPA 1668A	10129405	NELAP	LA
8940 - 2,4',5-Trichlorobiphenyl (BZ-31)	EPA 1668A	10129405	NELAP	LA
9255 - 2,4',6-Trichlorobiphenyl (BZ-32)	EPA 1668A	10129405	NELAP	LA
9256 - 2,4'-Dichlorobiphenyl (BZ-8)	EPA 1668A	10129405	NELAP	LA
9250 - 2,4,4',5-Tetrachlorobiphenyl (BZ-74)	EPA 1668A	10129405	NELAP	LA
9251 - 2,4,4',6-Tetrachlorobiphenyl (BZ-75)	EPA 1668A	10129405	NELAP	LA
9252 - 2,4,4'-Trichlorobiphenyl (BZ-28)	EPA 1668A	10129405	NELAP	LA
9253 - 2,4,5-Trichlorobiphenyl (BZ-29)	EPA 1668A	10129405	NELAP	LA
9254 - 2,4,6-Trichlorobiphenyl (BZ-30)	EPA 1668A	10129405	NELAP	LA
9257 - 2,4-Dichlorobiphenyl (BZ-7)	EPA 1668A	10129405	NELAP	LA
9258 - 2,5-Dichlorobiphenyl (BZ-9)	EPA 1668A	10129405	NELAP	LA
9259 - 2,6-Dichlorobiphenyl (BZ-10)	EPA 1668A	10129405	NELAP	LA
8915 - 2-Chlorobiphenyl (BZ-1)	EPA 1668A	10129405	NELAP	LA
9060 - 3,3',4,4',5,5'-Hexachlorobiphenyl (BZ-169)	EPA 1668A	10129405	NELAP	LA
9015 - 3,3',4,4',5-Pentachlorobiphenyl (BZ-126)	EPA 1668A	10129405	NELAP	LA
8965 - 3,3',4,4'-Tetrachlorobiphenyl (BZ-77)	EPA 1668A	10129405	NELAP	LA
9261 - 3,3',4,5'-Tetrachlorobiphenyl (BZ-79)	EPA 1668A	10129405	NELAP	LA
9260 - 3,3',4,5,5'-Pentachlorobiphenyl (BZ-127)	EPA 1668A	10129405	NELAP	LA
9262 - 3,3',4,5-Tetrachlorobiphenyl (BZ-78)	EPA 1668A	10129405	NELAP	LA
9263 - 3,3',4-Trichlorobiphenyl (BZ-35)	EPA 1668A	10129405	NELAP	LA
9264 - 3,3',5,5'-Tetrachlorobiphenyl (BZ-80)	EPA 1668A	10129405	NELAP	LA
9265 - 3,3',5-Trichlorobiphenyl (BZ-36)	EPA 1668A	10129405	NELAP	LA
8925 - 3,3'-Dichlorobiphenyl (BZ-11)	EPA 1668A	10129405	NELAP	LA
9268 - 3,4',5-Trichlorobiphenyl (BZ-39)	EPA 1668A	10129405	NELAP	LA
9269 - 3,4'-Dichlorobiphenyl (BZ-13)	EPA 1668A	10129405	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
8970 - 3,4,4',5-Tetrachlorobiphenyl (BZ-81)	EPA 1668A	10129405	NELAP	LA
9266 - 3,4,4'-Trichlorobiphenyl (BZ-37)	EPA 1668A	10129405	NELAP	LA
9267 - 3,4,5-Trichlorobiphenyl (BZ-38)	EPA 1668A	10129405	NELAP	LA
9270 - 3,4-Dichlorobiphenyl (BZ-12)	EPA 1668A	10129405	NELAP	LA
9271 - 3,5-Dichlorobiphenyl (BZ-14)	EPA 1668A	10129405	NELAP	LA
9272 - 3-Chlorobiphenyl (BZ-2)	EPA 1668A	10129405	NELAP	LA
9273 - 4,4'-Dichlorobiphenyl (BZ-15)	EPA 1668A	10129405	NELAP	LA
9274 - 4-Chlorobiphenyl (BZ-3)	EPA 1668A	10129405	NELAP	LA
9519 - 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290	10187209	NELAP	LA
9516 - 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290	10187209	NELAP	LA
9426 - 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-hpcdd)	EPA 8290	10187209	NELAP	LA
9420 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	EPA 8290	10187209	NELAP	LA
9423 - 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	EPA 8290	10187209	NELAP	LA
9453 - 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	EPA 8290	10187209	NELAP	LA
9471 - 1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	EPA 8290	10187209	NELAP	LA
9456 - 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	EPA 8290	10187209	NELAP	LA
9474 - 1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	EPA 8290	10187209	NELAP	LA
9459 - 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	EPA 8290	10187209	NELAP	LA
9477 - 1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	EPA 8290	10187209	NELAP	LA
9540 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	EPA 8290	10187209	NELAP	LA
9543 - 1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	EPA 8290	10187209	NELAP	LA
9480 - 2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 8290	10187209	NELAP	LA
9549 - 2,3,4,7,8-Pentachlorodibenzofuran	EPA 8290	10187209	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA 8290	10187209	NELAP	LA
9612 - 2,3,7,8-Tetrachlorodibenzofuran	EPA 8290	10187209	NELAP	LA
9438 - Total Hpcdd	EPA 8290	10187209	NELAP	LA
9444 - Total Hpcdf	EPA 8290	10187209	NELAP	LA
9468 - Total Hxcdd	EPA 8290	10187209	NELAP	LA
9483 - Total Hxcdf	EPA 8290	10187209	NELAP	LA
9555 - Total Pecdd	EPA 8290	10187209	NELAP	LA
9552 - Total Pecdf	EPA 8290	10187209	NELAP	LA
9609 - Total TCDD	EPA 8290	10187209	NELAP	LA
9615 - Total TCDF	EPA 8290	10187209	NELAP	LA
9519 - 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9516 - 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9426 - 1,2,3,4,6,7,8-Heptachlorodibenzo-p-	EPA 8290A, Rev.2007	10187403	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
dioxin (1,2,3,4,6,7,8-hpcdd)				
9420 - 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-hpcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9423 - 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-hpcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9453 - 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (1,2,3,4,7,8-Hxcdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9471 - 1,2,3,4,7,8-Hexachlorodibenzofuran (1,2,3,4,7,8-Hxcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9456 - 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin(1,2,3,6,7,8-Hxcdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9474 - 1,2,3,6,7,8-Hexachlorodibenzofuran (1,2,3,6,7,8-Hxcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9459 - 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (1,2,3,7,8,9-Hxcdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9477 - 1,2,3,7,8,9-Hexachlorodibenzofuran (1,2,3,7,8,9-Hxcdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9540 - 1,2,3,7,8-Pentachlorodibenzo-p-dioxin (1,2,3,7,8-Pecdd)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9543 - 1,2,3,7,8-Pentachlorodibenzofuran (1,2,3,7,8-Pecdf)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9480 - 2,3,4,6,7,8-Hexachlorodibenzofuran	EPA 8290A, Rev.2007	10187403	NELAP	LA
9549 - 2,3,4,7,8-Pentachlorodibenzofuran	EPA 8290A, Rev.2007	10187403	NELAP	LA
9618 - 2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD)	EPA 8290A, Rev.2007	10187403	NELAP	LA
9612 - 2,3,7,8-Tetrachlorodibenzofuran	EPA 8290A, Rev.2007	10187403	NELAP	LA
9438 - Total Hpcdd	EPA 8290A, Rev.2007	10187403	NELAP	LA
9444 - Total Hpcdf	EPA 8290A, Rev.2007	10187403	NELAP	LA
9468 - Total Hxcdd	EPA 8290A, Rev.2007	10187403	NELAP	LA
9483 - Total Hxcdf	EPA 8290A, Rev.2007	10187403	NELAP	LA
9555 - Total Pecdd	EPA 8290A, Rev.2007	10187403	NELAP	LA
9552 - Total Pecdf	EPA 8290A, Rev.2007	10187403	NELAP	LA
9609 - Total TCDD	EPA 8290A, Rev.2007	10187403	NELAP	LA
9615 - Total TCDF	EPA 8290A, Rev.2007	10187403	NELAP	LA
9105 - 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl (BZ-209)	EPA 1668C	10262109	NELAP	LA
9095 - 2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ-206)	EPA 1668C	10262109	NELAP	LA
9090 - 2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ-194)	EPA 1668C	10262109	NELAP	LA
9102 - 2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ-196)	EPA 1668C	10262109	NELAP	LA
9101 - 2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ-207)	EPA 1668C	10262109	NELAP	LA
9103 - 2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ-195)	EPA 1668C	10262109	NELAP	LA
9065 - 2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ-170)	EPA 1668C	10262109	NELAP	LA
9104 - 2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ-197)	EPA 1668C	10262109	NELAP	LA
9106 - 2,2',3,3',4,4',6-Heptachlorobiphenyl (BZ-171)	EPA 1668C	10262109	NELAP	LA
9020 - 2,2',3,3',4,4'-Hexachlorobiphenyl	EPA 1668C	10262109	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
(BZ-128)				
9114 - 2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ-177)	EPA 1668C	10262109	NELAP	LA
9112 - 2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ-201)	EPA 1668C	10262109	NELAP	LA
9115 - 2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ-175)	EPA 1668C	10262109	NELAP	LA
9117 - 2,2',3,3',4,5'-Hexachlorobiphenyl (BZ-130)	EPA 1668C	10262109	NELAP	LA
9108 - 2,2',3,3',4,5,5',6'-Octachlorobiphenyl (BZ-199)	EPA 1668C	10262109	NELAP	LA
9107 - 2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ-208)	EPA 1668C	10262109	NELAP	LA
9109 - 2,2',3,3',4,5,5',6-Octachlorobiphenyl (BZ-198)	EPA 1668C	10262109	NELAP	LA
9110 - 2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ-172)	EPA 1668C	10262109	NELAP	LA
9116 - 2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ-174)	EPA 1668C	10262109	NELAP	LA
9111 - 2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ-200)	EPA 1668C	10262109	NELAP	LA
9113 - 2,2',3,3',4,5,6-Heptachlorobiphenyl (BZ-173)	EPA 1668C	10262109	NELAP	LA
9118 - 2,2',3,3',4,5-Hexachlorobiphenyl (BZ-129)	EPA 1668C	10262109	NELAP	LA
9120 - 2,2',3,3',4,6'-Hexachlorobiphenyl (BZ-132)	EPA 1668C	10262109	NELAP	LA
9119 - 2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ-176)	EPA 1668C	10262109	NELAP	LA
9121 - 2,2',3,3',4,6-Hexachlorobiphenyl (BZ-131)	EPA 1668C	10262109	NELAP	LA
9122 - 2,2',3,3',4-Pentachlorobiphenyl (BZ-82)	EPA 1668C	10262109	NELAP	LA
9123 - 2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ-202)	EPA 1668C	10262109	NELAP	LA
9124 - 2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ-178)	EPA 1668C	10262109	NELAP	LA
9125 - 2,2',3,3',5,5'-Hexachlorobiphenyl (BZ-133)	EPA 1668C	10262109	NELAP	LA
9127 - 2,2',3,3',5,6'-Hexachlorobiphenyl (BZ-135)	EPA 1668C	10262109	NELAP	LA
9126 - 2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ-179)	EPA 1668C	10262109	NELAP	LA
9128 - 2,2',3,3',5,6-Hexachlorobiphenyl (BZ-134)	EPA 1668C	10262109	NELAP	LA
9129 - 2,2',3,3',5-Pentachlorobiphenyl (BZ-83)	EPA 1668C	10262109	NELAP	LA
9130 - 2,2',3,3',6,6'-Hexachlorobiphenyl (BZ-136)	EPA 1668C	10262109	NELAP	LA
9131 - 2,2',3,3',6-Pentachlorobiphenyl (BZ-84)	EPA 1668C	10262109	NELAP	LA
9132 - 2,2',3,3'-Tetrachlorobiphenyl (BZ-40)	EPA 1668C	10262109	NELAP	LA
9151 - 2,2',3,4',5',6-Hexachlorobiphenyl (BZ-149)	EPA 1668C	10262109	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
9154 - 2,2',3,4',5'-Pentachlorobiphenyl (BZ-97)	EPA 1668C	10262109	NELAP	LA
9080 - 2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ-187)	EPA 1668C	10262109	NELAP	LA
9144 - 2,2',3,4',5,5'-Hexachlorobiphenyl (BZ-146)	EPA 1668C	10262109	NELAP	LA
9147 - 2,2',3,4',5,6'-Hexachlorobiphenyl (BZ-148)	EPA 1668C	10262109	NELAP	LA
9146 - 2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ-188)	EPA 1668C	10262109	NELAP	LA
9149 - 2,2',3,4',5,6-Hexachlorobiphenyl (BZ-147)	EPA 1668C	10262109	NELAP	LA
9155 - 2,2',3,4',5-Pentachlorobiphenyl (BZ-90)	EPA 1668C	10262109	NELAP	LA
9159 - 2,2',3,4',6'-Pentachlorobiphenyl (BZ-98)	EPA 1668C	10262109	NELAP	LA
9157 - 2,2',3,4',6,6'-Hexachlorobiphenyl (BZ-150)	EPA 1668C	10262109	NELAP	LA
9160 - 2,2',3,4',6-Pentachlorobiphenyl (BZ-91)	EPA 1668C	10262109	NELAP	LA
9162 - 2,2',3,4'-Tetrachlorobiphenyl (BZ-42)	EPA 1668C	10262109	NELAP	LA
9075 - 2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ-183)	EPA 1668C	10262109	NELAP	LA
9025 - 2,2',3,4,4',5'-Hexachlorobiphenyl (BZ-138)	EPA 1668C	10262109	NELAP	LA
9133 - 2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ-203)	EPA 1668C	10262109	NELAP	LA
9134 - 2,2',3,4,4',5,5'-Heptachlorobiphenyl (BZ-180)	EPA 1668C	10262109	NELAP	LA
9136 - 2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ-182)	EPA 1668C	10262109	NELAP	LA
9135 - 2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ-204)	EPA 1668C	10262109	NELAP	LA
9137 - 2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ-181)	EPA 1668C	10262109	NELAP	LA
9138 - 2,2',3,4,4',5-Hexachlorobiphenyl (BZ-137)	EPA 1668C	10262109	NELAP	LA
9140 - 2,2',3,4,4',6'-Hexachlorobiphenyl (BZ-140)	EPA 1668C	10262109	NELAP	LA
9139 - 2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ-184)	EPA 1668C	10262109	NELAP	LA
9141 - 2,2',3,4,4',6-Hexachlorobiphenyl (BZ-139)	EPA 1668C	10262109	NELAP	LA
9142 - 2,2',3,4,4'-Pentachlorobiphenyl (BZ-85)	EPA 1668C	10262109	NELAP	LA
9150 - 2,2',3,4,5',6-Hexachlorobiphenyl (BZ-144)	EPA 1668C	10262109	NELAP	LA
8975 - 2,2',3,4,5'-Pentachlorobiphenyl (BZ-87)	EPA 1668C	10262109	NELAP	LA
9143 - 2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ-185)	EPA 1668C	10262109	NELAP	LA
9030 - 2,2',3,4,5,5'-Hexachlorobiphenyl (BZ-141)	EPA 1668C	10262109	NELAP	LA
9152 - 2,2',3,4,5,6'-Hexachlorobiphenyl	EPA 1668C	10262109	NELAP	LA

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Analyte	Method Name	Method Code	Type	AB
(BZ-143)				
9145 - 2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ-186)	EPA 1668C	10262109	NELAP	LA
9148 - 2,2',3,4,5,6-Hexachlorobiphenyl (BZ-142)	EPA 1668C	10262109	NELAP	LA
9153 - 2,2',3,4,5-Pentachlorobiphenyl (BZ-86)	EPA 1668C	10262109	NELAP	LA
9161 - 2,2',3,4,6'-Pentachlorobiphenyl (BZ-89)	EPA 1668C	10262109	NELAP	LA
9156 - 2,2',3,4,6,6'-Hexachlorobiphenyl (BZ-145)	EPA 1668C	10262109	NELAP	LA
9158 - 2,2',3,4,6-Pentachlorobiphenyl (BZ-88)	EPA 1668C	10262109	NELAP	LA
9163 - 2,2',3,4-Tetrachlorobiphenyl (BZ-41)	EPA 1668C	10262109	NELAP	LA
9166 - 2,2',3,5',6-Pentachlorobiphenyl (BZ-95)	EPA 1668C	10262109	NELAP	LA
8945 - 2,2',3,5'-Tetrachlorobiphenyl (BZ-44)	EPA 1668C	10262109	NELAP	LA
9035 - 2,2',3,5,5',6-Hexachlorobiphenyl (BZ-151)	EPA 1668C	10262109	NELAP	LA
9164 - 2,2',3,5,5'-Pentachlorobiphenyl (BZ-92)	EPA 1668C	10262109	NELAP	LA
9167 - 2,2',3,5,6'-Pentachlorobiphenyl (BZ-94)	EPA 1668C	10262109	NELAP	LA
9165 - 2,2',3,5,6,6'-Hexachlorobiphenyl (BZ-152)	EPA 1668C	10262109	NELAP	LA
9168 - 2,2',3,5,6-Pentachlorobiphenyl (BZ-93)	EPA 1668C	10262109	NELAP	LA
9169 - 2,2',3,5-Tetrachlorobiphenyl (BZ-43)	EPA 1668C	10262109	NELAP	LA
9171 - 2,2',3,6'-Tetrachlorobiphenyl (BZ-46)	EPA 1668C	10262109	NELAP	LA
9170 - 2,2',3,6,6'-Pentachlorobiphenyl (BZ-96)	EPA 1668C	10262109	NELAP	LA
9172 - 2,2',3,6-Tetrachlorobiphenyl (BZ-45)	EPA 1668C	10262109	NELAP	LA
9173 - 2,2',3-Trichlorobiphenyl (BZ-16)	EPA 1668C	10262109	NELAP	LA
9040 - 2,2',4,4',5,5'-Hexachlorobiphenyl (BZ-153)	EPA 1668C	10262109	NELAP	LA
9174 - 2,2',4,4',5,6'-Hexachlorobiphenyl (BZ-154)	EPA 1668C	10262109	NELAP	LA
9175 - 2,2',4,4',5-Pentachlorobiphenyl (BZ-99)	EPA 1668C	10262109	NELAP	LA
9176 - 2,2',4,4',6,6'-Hexachlorobiphenyl (BZ-155)	EPA 1668C	10262109	NELAP	LA
9177 - 2,2',4,4',6-Pentachlorobiphenyl (BZ-100)	EPA 1668C	10262109	NELAP	LA
9178 - 2,2',4,4'-Tetrachlorobiphenyl (BZ-47)	EPA 1668C	10262109	NELAP	LA
9179 - 2,2',4,5',6-Pentachlorobiphenyl (BZ-103)	EPA 1668C	10262109	NELAP	LA
8950 - 2,2',4,5'-Tetrachlorobiphenyl (BZ-49)	EPA 1668C	10262109	NELAP	LA
8980 - 2,2',4,5,5'-Pentachlorobiphenyl	EPA 1668C	10262109	NELAP	LA

Biological Tissue

Analyte	Method Name	Method Code	Type	AB
(BZ-101)				
9180 - 2,2',4,5,6'-Pentachlorobiphenyl (BZ-102)	EPA 1668C	10262109	NELAP	LA
9181 - 2,2',4,5-Tetrachlorobiphenyl (BZ-48)	EPA 1668C	10262109	NELAP	LA
9183 - 2,2',4,6'-Tetrachlorobiphenyl (BZ-51)	EPA 1668C	10262109	NELAP	LA
9182 - 2,2',4,6,6'-Pentachlorobiphenyl (BZ-104)	EPA 1668C	10262109	NELAP	LA
9184 - 2,2',4,6-Tetrachlorobiphenyl (BZ-50)	EPA 1668C	10262109	NELAP	LA
9185 - 2,2',4-Trichlorobiphenyl (BZ-17)	EPA 1668C	10262109	NELAP	LA
8955 - 2,2',5,5'-Tetrachlorobiphenyl (BZ-52)	EPA 1668C	10262109	NELAP	LA
9186 - 2,2',5,6'-Tetrachlorobiphenyl (BZ-53)	EPA 1668C	10262109	NELAP	LA
8930 - 2,2',5-Trichlorobiphenyl (BZ-18)	EPA 1668C	10262109	NELAP	LA
9187 - 2,2',6,6'-Tetrachlorobiphenyl (BZ-54)	EPA 1668C	10262109	NELAP	LA
9188 - 2,2',6-Trichlorobiphenyl (BZ-19)	EPA 1668C	10262109	NELAP	LA
9189 - 2,2'-Dichlorobiphenyl (BZ-4)	EPA 1668C	10262109	NELAP	LA
9224 - 2,3',4',5',6-Pentachlorobiphenyl (BZ-125)	EPA 1668C	10262109	NELAP	LA
9229 - 2,3',4',5'-Tetrachlorobiphenyl (BZ-76)	EPA 1668C	10262109	NELAP	LA
9222 - 2,3',4',5,5'-Pentachlorobiphenyl (BZ-124)	EPA 1668C	10262109	NELAP	LA
9230 - 2,3',4',5-Tetrachlorobiphenyl (BZ-70)	EPA 1668C	10262109	NELAP	LA
9237 - 2,3',4',6-Tetrachlorobiphenyl (BZ-71)	EPA 1668C	10262109	NELAP	LA
9239 - 2,3',4'-Trichlorobiphenyl (BZ-33)	EPA 1668C	10262109	NELAP	LA
9218 - 2,3',4,4',5',6-Hexachlorobiphenyl (BZ-168)	EPA 1668C	10262109	NELAP	LA
9011 - 2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	EPA 1668C	10262109	NELAP	LA
9055 - 2,3',4,4',5,5'-Hexachlorobiphenyl (BZ-167)	EPA 1668C	10262109	NELAP	LA
8995 - 2,3',4,4',5-Pentachlorobiphenyl (BZ-118)	EPA 1668C	10262109	NELAP	LA
9220 - 2,3',4,4',6-Pentachlorobiphenyl (BZ-119)	EPA 1668C	10262109	NELAP	LA
8960 - 2,3',4,4'-Tetrachlorobiphenyl (BZ-66)	EPA 1668C	10262109	NELAP	LA
9226 - 2,3',4,5',6-Pentachlorobiphenyl (BZ-121)	EPA 1668C	10262109	NELAP	LA
9231 - 2,3',4,5'-Tetrachlorobiphenyl (BZ-68)	EPA 1668C	10262109	NELAP	LA
9223 - 2,3',4,5,5'-Pentachlorobiphenyl (BZ-120)	EPA 1668C	10262109	NELAP	LA
9232 - 2,3',4,5-Tetrachlorobiphenyl (BZ-67)	EPA 1668C	10262109	NELAP	LA
9235 - 2,3',4,6-Tetrachlorobiphenyl (BZ-69)	EPA 1668C	10262109	NELAP	LA
9240 - 2,3',4-Trichlorobiphenyl (BZ-25)	EPA 1668C	10262109	NELAP	LA

Biological Tissue

Analyte	Method Name	Method Code	Type	AB
9244 - 2,3',5',6-Tetrachlorobiphenyl (BZ-73)	EPA 1668C	10262109	NELAP	LA
9246 - 2,3',5'-Trichlorobiphenyl (BZ-34)	EPA 1668C	10262109	NELAP	LA
9242 - 2,3',5,5'-Tetrachlorobiphenyl (BZ-72)	EPA 1668C	10262109	NELAP	LA
8935 - 2,3',5-Trichlorobiphenyl (BZ-26)	EPA 1668C	10262109	NELAP	LA
9248 - 2,3',6-Trichlorobiphenyl (BZ-27)	EPA 1668C	10262109	NELAP	LA
9249 - 2,3'-Dichlorobiphenyl (BZ-6)	EPA 1668C	10262109	NELAP	LA
9201 - 2,3,3',4',5',6-Hexachlorobiphenyl (BZ-164)	EPA 1668C	10262109	NELAP	LA
9202 - 2,3,3',4',5'-Pentachlorobiphenyl (BZ-122)	EPA 1668C	10262109	NELAP	LA
9195 - 2,3,3',4',5,5',6-Heptachlorobiphenyl (BZ-193)	EPA 1668C	10262109	NELAP	LA
9197 - 2,3,3',4',5,5'-Hexachlorobiphenyl (BZ-162)	EPA 1668C	10262109	NELAP	LA
9199 - 2,3,3',4',5,6-Hexachlorobiphenyl (BZ-163)	EPA 1668C	10262109	NELAP	LA
9205 - 2,3,3',4',5-Pentachlorobiphenyl (BZ-107)	EPA 1668C	10262109	NELAP	LA
8990 - 2,3,3',4',6-Pentachlorobiphenyl (BZ-110)	EPA 1668C	10262109	NELAP	LA
9207 - 2,3,3',4'-Tetrachlorobiphenyl (BZ-56)	EPA 1668C	10262109	NELAP	LA
9192 - 2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ-191)	EPA 1668C	10262109	NELAP	LA
9045 - 2,3,3',4,4',5'-Hexachlorobiphenyl (BZ-157)	EPA 1668C	10262109	NELAP	LA
9190 - 2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ-205)	EPA 1668C	10262109	NELAP	LA
9085 - 2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ-189)	EPA 1668C	10262109	NELAP	LA
9191 - 2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ-190)	EPA 1668C	10262109	NELAP	LA
9050 - 2,3,3',4,4',5-Hexachlorobiphenyl (BZ-156)	EPA 1668C	10262109	NELAP	LA
9193 - 2,3,3',4,4',6-Hexachlorobiphenyl (BZ-158)	EPA 1668C	10262109	NELAP	LA
8985 - 2,3,3',4,4'-Pentachlorobiphenyl (BZ-105)	EPA 1668C	10262109	NELAP	LA
9200 - 2,3,3',4,5',6-Hexachlorobiphenyl (BZ-161)	EPA 1668C	10262109	NELAP	LA
9203 - 2,3,3',4,5'-Pentachlorobiphenyl (BZ-108)	EPA 1668C	10262109	NELAP	LA
9194 - 2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ-192)	EPA 1668C	10262109	NELAP	LA
9196 - 2,3,3',4,5,5'-Hexachlorobiphenyl (BZ-159)	EPA 1668C	10262109	NELAP	LA
9198 - 2,3,3',4,5,6-Hexachlorobiphenyl (BZ-160)	EPA 1668C	10262109	NELAP	LA
9204 - 2,3,3',4,5-Pentachlorobiphenyl (BZ-106)	EPA 1668C	10262109	NELAP	LA
9206 - 2,3,3',4,6-Pentachlorobiphenyl (BZ-109)	EPA 1668C	10262109	NELAP	LA
9208 - 2,3,3',4-Tetrachlorobiphenyl (BZ-	EPA 1668C	10262109	NELAP	LA

Biological Tissue

Analyte	Method Name	Method Code	Type	AB
55)				
9212 - 2,3,3',5',6-Pentachlorobiphenyl (BZ-113)	EPA 1668C	10262109	NELAP	LA
9213 - 2,3,3',5'-Tetrachlorobiphenyl (BZ-58)	EPA 1668C	10262109	NELAP	LA
9209 - 2,3,3',5,5',6-Hexachlorobiphenyl (BZ-165)	EPA 1668C	10262109	NELAP	LA
9210 - 2,3,3',5,5'-Pentachlorobiphenyl (BZ-111)	EPA 1668C	10262109	NELAP	LA
9211 - 2,3,3',5,6-Pentachlorobiphenyl (BZ-112)	EPA 1668C	10262109	NELAP	LA
9214 - 2,3,3',5-Tetrachlorobiphenyl (BZ-57)	EPA 1668C	10262109	NELAP	LA
9215 - 2,3,3',6-Tetrachlorobiphenyl (BZ-59)	EPA 1668C	10262109	NELAP	LA
9216 - 2,3,3'-Trichlorobiphenyl (BZ-20)	EPA 1668C	10262109	NELAP	LA
9227 - 2,3,4',5,6-Pentachlorobiphenyl (BZ-117)	EPA 1668C	10262109	NELAP	LA
9233 - 2,3,4',5-Tetrachlorobiphenyl (BZ-63)	EPA 1668C	10262109	NELAP	LA
9236 - 2,3,4',6-Tetrachlorobiphenyl (BZ-64)	EPA 1668C	10262109	NELAP	LA
9241 - 2,3,4'-Trichlorobiphenyl (BZ-22)	EPA 1668C	10262109	NELAP	LA
9217 - 2,3,4,4',5,6-Hexachlorobiphenyl (BZ-166)	EPA 1668C	10262109	NELAP	LA
9005 - 2,3,4,4',5-Pentachlorobiphenyl (BZ-114)	EPA 1668C	10262109	NELAP	LA
9219 - 2,3,4,4',6-Pentachlorobiphenyl (BZ-115)	EPA 1668C	10262109	NELAP	LA
9221 - 2,3,4,4'-Tetrachlorobiphenyl (BZ-60)	EPA 1668C	10262109	NELAP	LA
9225 - 2,3,4,5,6-Pentachlorobiphenyl (BZ-116)	EPA 1668C	10262109	NELAP	LA
9228 - 2,3,4,5-Tetrachlorobiphenyl (BZ-61)	EPA 1668C	10262109	NELAP	LA
9234 - 2,3,4,6-Tetrachlorobiphenyl (BZ-62)	EPA 1668C	10262109	NELAP	LA
9238 - 2,3,4-Trichlorobiphenyl (BZ-21)	EPA 1668C	10262109	NELAP	LA
9243 - 2,3,5,6-Tetrachlorobiphenyl (BZ-65)	EPA 1668C	10262109	NELAP	LA
9245 - 2,3,5-Trichlorobiphenyl (BZ-23)	EPA 1668C	10262109	NELAP	LA
9247 - 2,3,6-Trichlorobiphenyl (BZ-24)	EPA 1668C	10262109	NELAP	LA
8920 - 2,3-Dichlorobiphenyl (BZ-5)	EPA 1668C	10262109	NELAP	LA
8940 - 2,4',5-Trichlorobiphenyl (BZ-31)	EPA 1668C	10262109	NELAP	LA
9255 - 2,4',6-Trichlorobiphenyl (BZ-32)	EPA 1668C	10262109	NELAP	LA
9256 - 2,4'-Dichlorobiphenyl (BZ-8)	EPA 1668C	10262109	NELAP	LA
9250 - 2,4,4',5-Tetrachlorobiphenyl (BZ-74)	EPA 1668C	10262109	NELAP	LA
9251 - 2,4,4',6-Tetrachlorobiphenyl (BZ-75)	EPA 1668C	10262109	NELAP	LA
9252 - 2,4,4'-Trichlorobiphenyl (BZ-28)	EPA 1668C	10262109	NELAP	LA
9253 - 2,4,5-Trichlorobiphenyl (BZ-29)	EPA 1668C	10262109	NELAP	LA
9254 - 2,4,6-Trichlorobiphenyl (BZ-30)	EPA 1668C	10262109	NELAP	LA
9257 - 2,4-Dichlorobiphenyl (BZ-7)	EPA 1668C	10262109	NELAP	LA
9258 - 2,5-Dichlorobiphenyl (BZ-9)	EPA 1668C	10262109	NELAP	LA

Biological Tissue

Analyte	Method Name	Method Code	Type	AB
9259 - 2,6-Dichlorobiphenyl (BZ-10)	EPA 1668C	10262109	NELAP	LA
8915 - 2-Chlorobiphenyl (BZ-1)	EPA 1668C	10262109	NELAP	LA
9060 - 3,3',4,4',5,5'-Hexachlorobiphenyl (BZ-169)	EPA 1668C	10262109	NELAP	LA
9015 - 3,3',4,4',5-Pentachlorobiphenyl (BZ-126)	EPA 1668C	10262109	NELAP	LA
8965 - 3,3',4,4'-Tetrachlorobiphenyl (BZ-77)	EPA 1668C	10262109	NELAP	LA
9261 - 3,3',4,5'-Tetrachlorobiphenyl (BZ-79)	EPA 1668C	10262109	NELAP	LA
9260 - 3,3',4,5,5'-Pentachlorobiphenyl (BZ-127)	EPA 1668C	10262109	NELAP	LA
9262 - 3,3',4,5-Tetrachlorobiphenyl (BZ-78)	EPA 1668C	10262109	NELAP	LA
9263 - 3,3',4-Trichlorobiphenyl (BZ-35)	EPA 1668C	10262109	NELAP	LA
9264 - 3,3',5,5'-Tetrachlorobiphenyl (BZ-80)	EPA 1668C	10262109	NELAP	LA
9265 - 3,3',5-Trichlorobiphenyl (BZ-36)	EPA 1668C	10262109	NELAP	LA
8925 - 3,3'-Dichlorobiphenyl (BZ-11)	EPA 1668C	10262109	NELAP	LA
9268 - 3,4',5-Trichlorobiphenyl (BZ-39)	EPA 1668C	10262109	NELAP	LA
9269 - 3,4'-Dichlorobiphenyl (BZ-13)	EPA 1668C	10262109	NELAP	LA
8970 - 3,4,4',5-Tetrachlorobiphenyl (BZ-81)	EPA 1668C	10262109	NELAP	LA
9266 - 3,4,4'-Trichlorobiphenyl (BZ-37)	EPA 1668C	10262109	NELAP	LA
9267 - 3,4,5-Trichlorobiphenyl (BZ-38)	EPA 1668C	10262109	NELAP	LA
9270 - 3,4-Dichlorobiphenyl (BZ-12)	EPA 1668C	10262109	NELAP	LA
9271 - 3,5-Dichlorobiphenyl (BZ-14)	EPA 1668C	10262109	NELAP	LA
9272 - 3-Chlorobiphenyl (BZ-2)	EPA 1668C	10262109	NELAP	LA
9273 - 4,4'-Dichlorobiphenyl (BZ-15)	EPA 1668C	10262109	NELAP	LA
9274 - 4-Chlorobiphenyl (BZ-3)	EPA 1668C	10262109	NELAP	LA

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 488 • Manchester, WA 98353-0488 • (360) 871-8840

June 30, 2022

Cameron McIntosh
ALS Environmental - Burlington
1435 Norjohn Court, Unit 1
Burlington, ON L7L 0E6

Dear Cameron McIntosh:

Thank you for your submission to re-instate accreditation for the below parameters in recognition of your Canadian Association for Laboratory Accreditation. Attached is a current Scope of Accreditation reflecting the updated accreditation.

- 2,2',3,3',4,4'-Hexabromodiphenylether (BDE-128) by EPA 1614A_2010 in Non-Potable Water and Solid and Chemical Materials
- 2,3,3',4,4'-Pentabromodiphenylether (BDE-105) by EPA 1614A_2010 in Non-Potable Water and Solid and Chemical Materials
- 3,3',4,5'-Tetrabromodiphenylether (BDE-79) by EPA 1614A_2010 in Non-Potable Water and Solid and Chemical Materials
- 1,2,3,4-Tetrachlorobenzene by EPA 1699_2007 in Solid and Chemical Materials
- 1,2,4,5-Tetrachlorobenzene by EPA 1699_2007 in Solid and Chemical Materials
- Hexachlorobenzene by EPA 1699_2007 in Solid and Chemical Materials
- Octachlorostyrene by EPA 1699_2007 in Solid and Chemical Materials
- Oxychlordane by EPA 1699_2007 in Solid and Chemical Materials
- Parlar-26 by EPA 1699_2007 in Solid and Chemical Materials
- Parlar-50 by EPA 1699_2007 in Solid and Chemical Materials
- Parlar-62 by EPA 1699_2007 in Solid and Chemical Materials
- Pentachlorobenzene by EPA 1699_2007 in Solid and Chemical Materials

Renewal of accreditation is based in part on review of your lab's performance over the past year as evidenced by participation in proficiency testing (PT) studies. In general, full accreditation is awarded for those parameters for which the two most recent PT results, if applicable, were rated satisfactory. Provisional accreditation is awarded if the latest of the two most recent PT results was rated "Not Acceptable" or only one PT result was submitted during the past twelve months. Accreditation is withheld for those parameters for which the two most recent PT results were rated "Not Acceptable" or no PT results were submitted during the past twelve-months.

As a reminder, continued participation in the Ecology Lab Accreditation Program requires the lab to:

- Submit a renewal application and fees annually
- Report significant changes in facility, personnel, analytical methods, equipment, the lab's quality assurance (QA) manual or QA procedures as they occur
- **Participate in proficiency testing studies semi-annually, with the following exception: For each parameter where all PT results were satisfactory, you are required to submit only one PT result over this next year, and in subsequent years, as long as the results are satisfactory.**
- Submit copies of current third-party Scopes of Accreditation when they are available.

If you have any questions concerning the accreditation of your lab, please contact Ryan Zboralski at (360) 871-8845, fax (360) 871-8849, or by e-mail at ryan.zboralski@ecy.wa.gov.

Sincerely,

Rebecca Wood
Lab Accreditation Unit Supervisor

RW:ERZ:erz
Enclosures

WASHINGTON STATE DEPARTMENT OF ECOLOGY

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

SCOPE OF ACCREDITATION

ALS Environmental - Burlington

Burlington, ON

is accredited for the analytes listed below using the methods indicated. Full accreditation is granted unless stated otherwise in a note. EPA is the U.S. Environmental Protection Agency. SM is "Standard Methods for the Examination of Water and Wastewater." SM refers to EPA approved method versions. ASTM is the American Society for Testing and Materials. USGS is the U.S. Geological Survey. AOAC is the Association of Official Analytical Chemists. Other references are described in notes.

Matrix/Analyte	Method	Notes
Drinking Water		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	EPA 1613B_1994	2
Non-Potable Water		
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 1613B_1994	1
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 1613B_1994	1
1,2,3,4,6,7,8-Hpcdd	EPA 1613B_1994	1
1,2,3,4,6,7,8-Hpcdf	EPA 1613B_1994	1
1,2,3,4,7,8,9-Hpcdf	EPA 1613B_1994	1
1,2,3,4,7,8-Hxcdd	EPA 1613B_1994	1
1,2,3,4,7,8-Hxcdf	EPA 1613B_1994	1
1,2,3,6,7,8-Hxcdd	EPA 1613B_1994	1
1,2,3,6,7,8-Hxcdf	EPA 1613B_1994	1
1,2,3,7,8,9-Hxcdd	EPA 1613B_1994	1
1,2,3,7,8,9-Hxcdf	EPA 1613B_1994	1
1,2,3,7,8-Pecdd	EPA 1613B_1994	1
1,2,3,7,8-Pecdf	EPA 1613B_1994	1
2,3,4,6,7,8-Hxcdf	EPA 1613B_1994	1
2,3,4,7,8-Pecdf	EPA 1613B_1994	1
2,3,7,8-TCDD	EPA 1613B_1994	1
2,3,7,8-TCDF	EPA 1613B_1994	1
Hpcdd, total	EPA 1613B_1994	1
Hpcdf, total	EPA 1613B_1994	1
Hxcdd, total	EPA 1613B_1994	1
Hxcdf, total	EPA 1613B_1994	1
Pecdd, total	EPA 1613B_1994	1
Pecdf, total	EPA 1613B_1994	1
TCDD, total	EPA 1613B_1994	1

Matrix/Analyte	Method	Notes
Non-Potable Water		
TCDF, total	EPA 1613B_1994	1
2,2',3,3',4,4',5,5',6-Nonabromodiphenylether (BDE-206)	EPA 1614A_2010	1,4
2,2',3,3',4,4',5,6,6'-Nonabromodiphenylether (BDE-207)	EPA 1614A_2010	1,4
2,2',3,3',4,4'-Hexabromodiphenylether (BDE-128)	EPA 1614A_2010	4,6
2,2',3,3',4,5,5',6,6'-Nonabromodiphenylether (BDE-208)	EPA 1614A_2010	1,4
2,2',3,4,4',5,5',6-Octabromodiphenylether (BDE-203)	EPA 1614A_2010	1,4
2,2',3,4,4',5,6-Heptabromodiphenylether (BDE-181)	EPA 1614A_2010	1,4
2,2',3,4,4',5',6-Heptabromodiphenylether (BDE-183)	EPA 1614A_2010	1,4
2,2',3,4,4',5'-Hexabromodiphenylether (BDE-138)	EPA 1614A_2010	1,4
2,2',3,4,4',6'-Hexabromodiphenylether (BDE-140)	EPA 1614A_2010	1,4
2,2',3,4,4'-Pentabromodiphenylether (BDE-85)	EPA 1614A_2010	1,4
2,2',4,4',5,5'-Hexabromodiphenyl ether (BDE-153)	EPA 1614A_2010	1,4
2,2',4,4',5',6-Hexabromodiphenylether (BDE-154)	EPA 1614A_2010	1,4
2,2',4,4',5-Pentabromodiphenyl ether (BDE-99)	EPA 1614A_2010	1,4
2,2',4,4',6,6'-Hexabromodiphenylether (BDE-155)	EPA 1614A_2010	1,4
2,2',4,4',6-Pentabromodiphenyl ether (BDE-100)	EPA 1614A_2010	1,4
2,2',4,4'-Tetrabromodiphenyl ether (BDE-47)	EPA 1614A_2010	1,4
2,2',4,5'-Tetrabromodiphenylether (BDE-49)	EPA 1614A_2010	1,4
2,2',4-Tribromodiphenylether (BDE-17)	EPA 1614A_2010	1,4
2,2'4,6'-Tetrabromodiphenylether (BDE-51)	EPA 1614A_2010	1,4
2,3,3',4,4',5,6-Heptabromodiphenylether (BDE-190)	EPA 1614A_2010	1,4
2,3,3',4,4'-Pentabromodiphenylether (BDE-105)	EPA 1614A_2010	4,6
2,3,4,4',5,6-Hexabromodiphenylether (BDE-166)	EPA 1614A_2010	1,4
2,3',4,4',5-Pentabromodiphenylether (BDE-118)	EPA 1614A_2010	1,4
2,3',4,4',6-Pentabromodiphenylether (BDE-119)	EPA 1614A_2010	1,4
2,3',4,4'-Tetrabromodiphenylether (BDE-66)	EPA 1614A_2010	1,4
2,3',4,5,5'-Pentabromodiphenylether (BDE-120)	EPA 1614A_2010	1,4
2,3,4,5,6-Pentabromodiphenylether (BDE-116)	EPA 1614A_2010	1,4
2,3',4',6-Tetrabromodiphenylether (BDE-71)	EPA 1614A_2010	1,4
2',3,4,-Tribromodiphenylether (BDE-33)	EPA 1614A_2010	1,4
2,3',4-Tribromodiphenylether (BDE-25)	EPA 1614A_2010	1,4
2,4,4',6-Tetrabromodiphenylether (BDE-75)	EPA 1614A_2010	1,4
2,4,4'-Tribromodiphenylether (BDE-28)	EPA 1614A_2010	1,4
2,4,6-Tribromodiphenylether (BDE-30)	EPA 1614A_2010	1,4
2,4',6-Tribromodiphenylether (BDE-32)	EPA 1614A_2010	1,4
2,4-Dibromodiphenylether (BDE-7)	EPA 1614A_2010	1,4
2,4'-Dibromodiphenylether (BDE-8)	EPA 1614A_2010	1,4

Matrix/Analyte	Method	Notes
Non-Potable Water		
2,6-Dibromodiphenylether (BDE-10)	EPA 1614A_2010	1,4
3,3',4,4',5-Pentabromodiphenylether (BDE-126)	EPA 1614A_2010	1,4
3,3',4,4'-Tetrabromodiphenylether (BDE-77)	EPA 1614A_2010	1,4
3,3',4,5'-Tetrabromodiphenylether (BDE-79)	EPA 1614A_2010	4,6
3,3',4-Tribromodiphenylether (BDE-35)	EPA 1614A_2010	1,4
3,3'-Dibromodiphenylether (BDE-11)	EPA 1614A_2010	1,4
3,4,4'-Tribromodiphenylether (BDE-37)	EPA 1614A_2010	1,4
3,4-Dibromodiphenylether (BDE-12)	EPA 1614A_2010	1,4
3,4'-Dibromodiphenylether (BDE-13)	EPA 1614A_2010	1,4
4,4'-Dibromodiphenylether (BDE-15)	EPA 1614A_2010	1,4
Decabromodiphenylether (BDE-209)	EPA 1614A_2010	1,4
Solid and Chemical Materials		
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 1613B_1994	1
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 1613B_1994	1
1,2,3,4,6,7,8-Hpcdd	EPA 1613B_1994	1
1,2,3,4,6,7,8-Hpcdf	EPA 1613B_1994	1
1,2,3,4,7,8,9-Hpcdf	EPA 1613B_1994	1
1,2,3,4,7,8-Hxcdd	EPA 1613B_1994	1
1,2,3,4,7,8-Hxcdf	EPA 1613B_1994	1
1,2,3,6,7,8-Hxcdd	EPA 1613B_1994	1
1,2,3,6,7,8-Hxcdf	EPA 1613B_1994	1
1,2,3,7,8,9-Hxcdd	EPA 1613B_1994	1
1,2,3,7,8,9-Hxcdf	EPA 1613B_1994	1
1,2,3,7,8-Pecdd	EPA 1613B_1994	1
1,2,3,7,8-Pecdf	EPA 1613B_1994	1
2,3,4,6,7,8-Hxcdf	EPA 1613B_1994	1
2,3,4,7,8-Pecdf	EPA 1613B_1994	1
2,3,7,8-TCDD	EPA 1613B_1994	1
2,3,7,8-TCDF	EPA 1613B_1994	1
Hpcdd, total	EPA 1613B_1994	1
Hpcdf, total	EPA 1613B_1994	1
Hxcdd, total	EPA 1613B_1994	1
Hxcdf, total	EPA 1613B_1994	1
Pecdd, total	EPA 1613B_1994	1
Pecdf, total	EPA 1613B_1994	1
TCDD, total	EPA 1613B_1994	1
TCDF, total	EPA 1613B_1994	1

Matrix/Analyte	Method	Notes
Solid and Chemical Materials		
2,2',3,3',4,4',5,5',6-Nonabromodiphenylether (BDE-206)	EPA 1614A_2010	1,4,5
2,2',3,3',4,4',5,6,6'-Nonabromodiphenylether (BDE-207)	EPA 1614A_2010	1,4,5
2,2',3,3',4,4'-Hexabromodiphenylether (BDE-128)	EPA 1614A_2010	4,5,6
2,2',3,3',4,5,5',6,6'-Nonabromodiphenylether (BDE-208)	EPA 1614A_2010	1,4,5
2,2',3,4,4',5,5',6-Octabromodiphenylether (BDE-203)	EPA 1614A_2010	1,4,5
2,2',3,4,4',5,6-Heptabromodiphenylether (BDE-181)	EPA 1614A_2010	1,4,5
2,2',3,4,4',5',6-Heptabromodiphenylether (BDE-183)	EPA 1614A_2010	1,4,5
2,2',3,4,4',5'-Hexabromodiphenylether (BDE-138)	EPA 1614A_2010	1,4,5
2,2',3,4,4',6'-Hexabromodiphenylether (BDE-140)	EPA 1614A_2010	1,4,5
2,2',3,4,4'-Pentabromodiphenylether (BDE-85)	EPA 1614A_2010	1,4,5
2,2',4,4',5,5'-Hexabromodiphenyl ether (BDE-153)	EPA 1614A_2010	1,4
2,2',4,4',5',6-Hexabromodiphenylether (BDE-154)	EPA 1614A_2010	1,4,5
2,2',4,4',5-Pentabromodiphenyl ether (BDE-99)	EPA 1614A_2010	1,4
2,2',4,4',6,6'-Hexabromodiphenylether (BDE-155)	EPA 1614A_2010	1,4,5
2,2',4,4',6-Pentabromodiphenyl ether (BDE-100)	EPA 1614A_2010	1,4,5
2,2',4,4'-Tetrabromodiphenyl ether (BDE-47)	EPA 1614A_2010	1,4,5
2,2',4,5'-Tetrabromodiphenylether (BDE-49)	EPA 1614A_2010	1,4,5
2,2',4-Tribromodiphenylether (BDE-17)	EPA 1614A_2010	1,4,5
2,2'4,6'-Tetrabromodiphenylether (BDE-51)	EPA 1614A_2010	1,4,5
2,3,3',4,4',5,6-Heptabromodiphenylether (BDE-190)	EPA 1614A_2010	1,4,5
2,3,3',4,4'-Pentabromodiphenylether (BDE-105)	EPA 1614A_2010	4,5,6
2,3,4,4',5,6-Hexabromodiphenylether (BDE-166)	EPA 1614A_2010	1,4,5
2,3',4,4',5-Pentabromodiphenylether (BDE-118)	EPA 1614A_2010	1,4,5
2,3',4,4',6-Pentabromodiphenylether (BDE-119)	EPA 1614A_2010	1,4,5
2,3',4,4'-Tetrabromodiphenylether (BDE-66)	EPA 1614A_2010	1,4,5
2,3',4,5,5'-Pentabromodiphenylether (BDE-120)	EPA 1614A_2010	1,4,5
2,3,4,5,6-Pentabromodiphenylether (BDE-116)	EPA 1614A_2010	1,4,5
2,3',4',6-Tetrabromodiphenylether (BDE-71)	EPA 1614A_2010	1,4,5
2',3,4,-Tribromodiphenylether (BDE-33)	EPA 1614A_2010	1,4,5
2,3',4-Tribromodiphenylether (BDE-25)	EPA 1614A_2010	1,4,5
2,4,4',6-Tetrabromodiphenylether (BDE-75)	EPA 1614A_2010	1,4,5
2,4,4'-Tribromodiphenylether (BDE-28)	EPA 1614A_2010	1,4,5
2,4,6-Tribromodiphenylether (BDE-30)	EPA 1614A_2010	1,4,5
2,4',6-Tribromodiphenylether (BDE-32)	EPA 1614A_2010	1,4,5
2,4-Dibromodiphenylether (BDE-7)	EPA 1614A_2010	1,4,5
2,4'-Dibromodiphenylether (BDE-8)	EPA 1614A_2010	1,4,5
2,6-Dibromodiphenylether (BDE-10)	EPA 1614A_2010	1,4,5

Matrix/Analyte	Method	Notes
Solid and Chemical Materials		
3,3',4,4',5-Pentabromodiphenylether (BDE-126)	EPA 1614A_2010	1,4,5
3,3',4,4'-Tetrabromodiphenylether (BDE-77)	EPA 1614A_2010	1,4,5
3,3',4,5'-Tetrabromodiphenylether (BDE-79)	EPA 1614A_2010	4,5,6
3,3',4-Tribromodiphenylether (BDE-35)	EPA 1614A_2010	1,4,5
3,3'-Dibromodiphenylether (BDE-11)	EPA 1614A_2010	1,4,5
3,4,4'-Tribromodiphenylether (BDE-37)	EPA 1614A_2010	1,4,5
3,4-Dibromodiphenylether (BDE-12)	EPA 1614A_2010	1,4,5
3,4'-Dibromodiphenylether (BDE-13)	EPA 1614A_2010	1,4,5
4,4'-Dibromodiphenylether (BDE-15)	EPA 1614A_2010	1,4,5
Decabromodiphenylether (BDE-209)	EPA 1614A_2010	1,4,5
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl (BZ-206)	EPA 1668C_2010	1,3,4
2,2',3,3',4,4',5,5'-Octachlorobiphenyl (BZ-194)	EPA 1668C_2010	1,3,4
2,2',3,3',4,4',5,6,6'-Nonachlorobiphenyl (BZ-207)	EPA 1668C_2010	1,3,4
2,2',3,3',4,4',5,6-Octachlorobiphenyl (BZ-195)	EPA 1668C_2010	1,3,4
2,2',3,3',4,4',5,6'-Octachlorobiphenyl (BZ-196)	EPA 1668C_2010	1,3,4
2,2',3,3',4,4',5-Heptachlorobiphenyl (BZ-170)	EPA 1668C_2010	1,3,4
2,2',3,3',4,4',6,6'-Octachlorobiphenyl (BZ-197)	EPA 1668C_2010	1,3,4
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl (BZ-208)	EPA 1668C_2010	1,3,4
2,2',3,3',4,5,5'-Heptachlorobiphenyl (BZ-172)	EPA 1668C_2010	1,3,4
2,2',3,3',4,5,6,6'-Octachlorobiphenyl (BZ-200)	EPA 1668C_2010	1,3,4
2,2',3,3',4,5',6,6'-Octachlorobiphenyl (BZ-201)	EPA 1668C_2010	1,3,4
2,2',3,3',4,5,6'-Heptachlorobiphenyl (BZ-174)	EPA 1668C_2010	1,3,4
2,2',3,3',4,5',6-Heptachlorobiphenyl (BZ-175)	EPA 1668C_2010	1,3,4
2,2',3,3',4,5',6'-Heptachlorobiphenyl (BZ-177)	EPA 1668C_2010	1,3,4
2,2',3,3',4,5'-Hexachlorobiphenyl (BZ-130)	EPA 1668C_2010	1,3,4
2,2',3,3',4,6,6'-Heptachlorobiphenyl (BZ-176)	EPA 1668C_2010	1,3,4
2,2',3,3',4,6-Hexachlorobiphenyl (BZ-131)	EPA 1668C_2010	1,3,4
2,2',3,3',4,6'-Hexachlorobiphenyl (BZ-132)	EPA 1668C_2010	1,3,4
2,2',3,3',4-Pentachlorobiphenyl (BZ-82)	EPA 1668C_2010	1,3,4
2,2',3,3',5,5',6,6'-Octachlorobiphenyl (BZ-202)	EPA 1668C_2010	1,3,4
2,2',3,3',5,5',6-Heptachlorobiphenyl (BZ-178)	EPA 1668C_2010	1,3,4
2,2',3,3',5,5'-Hexachlorobiphenyl (BZ-133)	EPA 1668C_2010	1,3,4
2,2',3,3',5,6,6'-Heptachlorobiphenyl (BZ-179)	EPA 1668C_2010	1,3,4
2,2',3,3',6,6'-Hexachlorobiphenyl (BZ-136)	EPA 1668C_2010	1,3,4
2,2',3,3',6-Pentachlorobiphenyl (BZ-84)	EPA 1668C_2010	1,3,4
2,2',3,4,4',5,5',6-Octachlorobiphenyl (BZ-203)	EPA 1668C_2010	1,3,4
2,2',3,4,4',5,6,6'-Octachlorobiphenyl (BZ-204)	EPA 1668C_2010	1,3,4

Matrix/Analyte	Method	Notes
Solid and Chemical Materials		
2,2',3,4,4',5,6-Heptachlorobiphenyl (BZ-181)	EPA 1668C_2010	1,3,4
2,2',3,4,4',5,6'-Heptachlorobiphenyl (BZ-182)	EPA 1668C_2010	1,3,4
2,2',3,4,4',5',6-Heptachlorobiphenyl (BZ-183)	EPA 1668C_2010	1,3,4
2,2',3,4,4',6,6'-Heptachlorobiphenyl (BZ-184)	EPA 1668C_2010	1,3,4
2,2',3,4,5,5',6-Heptachlorobiphenyl (BZ-185)	EPA 1668C_2010	1,3,4
2,2',3,4',5,5',6-Heptachlorobiphenyl (BZ-187)	EPA 1668C_2010	1,3,4
2,2',3,4,5,5'-Hexachlorobiphenyl (BZ-141)	EPA 1668C_2010	1,3,4
2,2',3,4',5,5'-Hexachlorobiphenyl (BZ-146)	EPA 1668C_2010	1,3,4
2,2',3,4,5,6,6'-Heptachlorobiphenyl (BZ-186)	EPA 1668C_2010	1,3,4
2,2',3,4',5,6,6'-Heptachlorobiphenyl (BZ-188)	EPA 1668C_2010	1,3,4
2,2',3,4,5,6-Hexachlorobiphenyl (BZ-142)	EPA 1668C_2010	1,3,4
2,2',3,4,5',6-Hexachlorobiphenyl (BZ-144)	EPA 1668C_2010	1,3,4
2,2',3,4',5,6'-Hexachlorobiphenyl (BZ-148)	EPA 1668C_2010	1,3,4
2,2',3,4,6,6'-Hexachlorobiphenyl (BZ-145)	EPA 1668C_2010	1,3,4
2,2',3,4',6,6'-Hexachlorobiphenyl (BZ-150)	EPA 1668C_2010	1,3,4
2,2',3,4,6'-Pentachlorobiphenyl (BZ-89)	EPA 1668C_2010	1,3,4
2,2',3,4'-Tetrachlorobiphenyl (BZ-42)	EPA 1668C_2010	1,3,4
2,2',3,5,5'-Pentachlorobiphenyl (BZ-92)	EPA 1668C_2010	1,3,4
2,2',3,5,6,6'-Hexachlorobiphenyl (BZ-152)	EPA 1668C_2010	1,3,4
2,2',3,5,6'-Pentachlorobiphenyl (BZ-94)	EPA 1668C_2010	1,3,4
2,2',3,5',6-Pentachlorobiphenyl (BZ-95)	EPA 1668C_2010	1,3,4
2,2',3,5-Tetrachlorobiphenyl (BZ-43)	EPA 1668C_2010	1,3,4
2,2',3,6,6'-Pentachlorobiphenyl (BZ-96)	EPA 1668C_2010	1,3,4
2,2',3,6'-Tetrachlorobiphenyl (BZ-46)	EPA 1668C_2010	1,3,4
2,2',3-Trichlorobiphenyl (BZ-16)	EPA 1668C_2010	1,3,4
2,2',4,4',5,6'-Hexachlorobiphenyl (BZ-154)	EPA 1668C_2010	1,3,4
2,2',4,4',6,6'-Hexachlorobiphenyl (BZ-155)	EPA 1668C_2010	1,3,4
2,2',4,5',6-Pentachlorobiphenyl (BZ-103)	EPA 1668C_2010	1,3,4
2,2',4,5-Tetrachlorobiphenyl (BZ-48)	EPA 1668C_2010	1,3,4
2,2',4,6,6'-Pentachlorobiphenyl (BZ-104)	EPA 1668C_2010	1,3,4
2,2',4-Trichlorobiphenyl (BZ-17)	EPA 1668C_2010	1,3,4
2,2',5,5'-Tetrachlorobiphenyl (BZ-52)	EPA 1668C_2010	1,3,4
2,2',6,6'-Tetrachlorobiphenyl (BZ-54)	EPA 1668C_2010	1,3,4
2,2',6-Trichlorobiphenyl (BZ-19)	EPA 1668C_2010	1,3,4
2,2'-Dichlorobiphenyl (BZ-4)	EPA 1668C_2010	1,3,4
2,3,3',4,4',5,5',6-Octachlorobiphenyl (BZ-205)	EPA 1668C_2010	1,3,4
2,3,3',4,4',5,5'-Heptachlorobiphenyl (BZ-189)	EPA 1668C_2010	1,3,4

Matrix/Analyte	Method	Notes
Solid and Chemical Materials		
2,3,3',4,4',5,6-Heptachlorobiphenyl (BZ-190)	EPA 1668C_2010	1,3,4
2,3,3',4,4',5',6-Heptachlorobiphenyl (BZ-191)	EPA 1668C_2010	1,3,4
2,3,3',4,4',6-Hexachlorobiphenyl (BZ-158)	EPA 1668C_2010	1,3,4
2,3,3',4,4'-Pentachlorobiphenyl (BZ-105)	EPA 1668C_2010	1,3,4
2,3,3',4,5,5',6-Heptachlorobiphenyl (BZ-192)	EPA 1668C_2010	1,3,4
2,3,3',4,5,5'-Hexachlorobiphenyl (BZ-159)	EPA 1668C_2010	1,3,4
2,3,3',4',5,5'-Hexachlorobiphenyl (BZ-162)	EPA 1668C_2010	1,3,4
2,3,3',4,5,6-Hexachlorobiphenyl (BZ-160)	EPA 1668C_2010	1,3,4
2,3,3',4,5',6-Hexachlorobiphenyl (BZ-161)	EPA 1668C_2010	1,3,4
2,3,3',4,5-Pentachlorobiphenyl (BZ-106)	EPA 1668C_2010	1,3,4
2,3,3',4',5-Pentachlorobiphenyl (BZ-107)	EPA 1668C_2010	1,3,4
2,3,3',4',5'-Pentachlorobiphenyl (BZ-122)	EPA 1668C_2010	1,3,4
2,3,3',4,6-Pentachlorobiphenyl (BZ-109)	EPA 1668C_2010	1,3,4
2,3,3',4-Tetrachlorobiphenyl (BZ-55)	EPA 1668C_2010	1,3,4
2,3,3',4'-Tetrachlorobiphenyl (BZ-56)	EPA 1668C_2010	1,3,4
2,3,3',5,5',6-Hexachlorobiphenyl (BZ-165)	EPA 1668C_2010	1,3,4
2,3,3',5,5'-Pentachlorobiphenyl (BZ-111)	EPA 1668C_2010	1,3,4
2,3,3',5,6-Pentachlorobiphenyl (BZ-112)	EPA 1668C_2010	1,3,4
2,3,3',5-Tetrachlorobiphenyl (BZ-57)	EPA 1668C_2010	1,3,4
2,3,3',5'-Tetrachlorobiphenyl (BZ-58)	EPA 1668C_2010	1,3,4
2,3',4,4',5,5'-Hexachlorobiphenyl (BZ-167)	EPA 1668C_2010	1,3,4
2,3,4,4',5-Pentachlorobiphenyl (BZ-114)	EPA 1668C_2010	1,3,4
2,3',4,4',5-Pentachlorobiphenyl (BZ-118)	EPA 1668C_2010	1,3,4
2,3',4,4',5'-Pentachlorobiphenyl (BZ-123)	EPA 1668C_2010	1,3,4
2,3,4,4'-Tetrachlorobiphenyl (BZ-60)	EPA 1668C_2010	1,3,4
2,3',4,4'-Tetrachlorobiphenyl (BZ-66)	EPA 1668C_2010	1,3,4
2,3',4,5,5'-Pentachlorobiphenyl (BZ-120)	EPA 1668C_2010	1,3,4
2,3',4,5',6-Pentachlorobiphenyl (BZ-121)	EPA 1668C_2010	1,3,4
2,3,4',5-Tetrachlorobiphenyl (BZ-63)	EPA 1668C_2010	1,3,4
2,3',4,5'-Tetrachlorobiphenyl (BZ-68)	EPA 1668C_2010	1,3,4
2,3',4,5-Tetrachlorobiphenyl (BZ-67)	EPA 1668C_2010	1,3,4
2,3,4',6-Tetrachlorobiphenyl (BZ-64)	EPA 1668C_2010	1,3,4
2,3,4'-Trichlorobiphenyl (BZ-22)	EPA 1668C_2010	1,3,4
2,3',4-Trichlorobiphenyl (BZ-25)	EPA 1668C_2010	1,3,4
2,3',5,5'-Tetrachlorobiphenyl (BZ-72)	EPA 1668C_2010	1,3,4
2,3',5',6-Tetrachlorobiphenyl (BZ-73)	EPA 1668C_2010	1,3,4
2,3,5-Trichlorobiphenyl (BZ-23)	EPA 1668C_2010	1,3,4

Matrix/Analyte	Method	Notes
Solid and Chemical Materials		
2,3',5'-Trichlorobiphenyl (BZ-34)	EPA 1668C_2010	1,3,4
2,3,6-Trichlorobiphenyl (BZ-24)	EPA 1668C_2010	1,3,4
2,3',6-Trichlorobiphenyl (BZ-27)	EPA 1668C_2010	1,3,4
2,3-Dichlorobiphenyl (BZ-5)	EPA 1668C_2010	1,3,4
2,3'-Dichlorobiphenyl (BZ-6)	EPA 1668C_2010	1,3,4
2,4',5-Trichlorobiphenyl (BZ-31)	EPA 1668C_2010	1,3,4
2,4',6-Trichlorobiphenyl (BZ-32)	EPA 1668C_2010	1,3,4
2,4-Dichlorobiphenyl (BZ-7)	EPA 1668C_2010	1,3,4
2,4'-Dichlorobiphenyl (BZ-8)	EPA 1668C_2010	1,3,4
2,5-Dichlorobiphenyl (BZ-9)	EPA 1668C_2010	1,3,4
2,6-Dichlorobiphenyl (BZ-10)	EPA 1668C_2010	1,3,4
2-Chlorobiphenyl (BZ-1)	EPA 1668C_2010	1,3,4
3,3',4,4',5,5'-Hexachlorobiphenyl (BZ-169)	EPA 1668C_2010	1,3,4
3,3',4,4',5-Pentachlorobiphenyl (BZ-126)	EPA 1668C_2010	1,3,4
3,3',4,4'-Tetrachlorobiphenyl (BZ-77)	EPA 1668C_2010	1,3,4
3,3',4,5,5'-Pentachlorobiphenyl (BZ-127)	EPA 1668C_2010	1,3,4
3,3',4,5-Tetrachlorobiphenyl (BZ-78)	EPA 1668C_2010	1,3,4
3,3',4,5'-Tetrachlorobiphenyl (BZ-79)	EPA 1668C_2010	1,3,4
3,3',4-Trichlorobiphenyl (BZ-35)	EPA 1668C_2010	1,3,4
3,3',5,5'-Tetrachlorobiphenyl (BZ-80)	EPA 1668C_2010	1,3,4
3,3',5-Trichlorobiphenyl (BZ-36)	EPA 1668C_2010	1,3,4
3,3'-Dichlorobiphenyl (BZ-11)	EPA 1668C_2010	1,3,4
3,4,4',5-Tetrachlorobiphenyl (BZ-81)	EPA 1668C_2010	1,3,4
3,4,4'-Trichlorobiphenyl (BZ-37)	EPA 1668C_2010	1,3,4
3,4,5-Trichlorobiphenyl (BZ-38)	EPA 1668C_2010	1,3,4
3,4',5-Trichlorobiphenyl (BZ-39)	EPA 1668C_2010	1,3,4
3,5-Dichlorobiphenyl (BZ-14)	EPA 1668C_2010	1,3,4
3-Chlorobiphenyl (BZ-2)	EPA 1668C_2010	1,3,4
4,4'-Dichlorobiphenyl (BZ-15)	EPA 1668C_2010	1,3,4
4-Chlorobiphenyl (BZ-3)	EPA 1668C_2010	1,3,4
Coelution - Dichlorobiphenyls (BZ-12-+13)	EPA 1668C_2010	1,3,4
Coelution - Heptachlorobiphenyls (BZ-171 + BZ-173)	EPA 1668C_2010	1,3,4
Coelution - Heptachlorobiphenyls (BZ-180 + BZ-193)	EPA 1668C_2010	1,3,4
Coelution - Hexachlorobiphenyls (BZ-128 + BZ-166)	EPA 1668C_2010	1,3,4
Coelution - Hexachlorobiphenyls (BZ-129 + BZ138 + BZ-163)	EPA 1668C_2010	1,3,4
Coelution - Hexachlorobiphenyls (BZ-134 + BZ-143)	EPA 1668C_2010	1,3,4
Coelution - Hexachlorobiphenyls (BZ-135 + BZ-151)	EPA 1668C_2010	1,3,4

Matrix/Analyte	Method	Notes
Solid and Chemical Materials		
Coelution - Hexachlorobiphenyls (BZ-139 + BZ-140)	EPA 1668C_2010	1,3,4
Coelution - Hexachlorobiphenyls (BZ-147 + BZ-149)	EPA 1668C_2010	1,3,4
Coelution - Hexachlorobiphenyls (BZ-153 + BZ-168)	EPA 1668C_2010	1,3,4
Coelution - Hexachlorobiphenyls (BZ-156 + BZ-157)	EPA 1668C_2010	1,3,4
Coelution - Octachlorobiphenyls (BZ-198 + BZ-199)	EPA 1668C_2010	1,3,4
Coelution - Pentachlorobiphenyls (BZ-108 + BZ-124)	EPA 1668C_2010	1,3,4
Coelution - Pentachlorobiphenyls (BZ-83 + BZ-99)	EPA 1668C_2010	1,3,4
Coelution - Pentachlorobiphenyls (BZ-86 + BZ-87 + BZ-97 + BZ-109 + BZ-119 + BZ-125)	EPA 1668C_2010	1,3,4
Coelution - Pentachlorobiphenyls (BZ-88 + BZ-91)	EPA 1668C_2010	1,3,4
Coelution - Pentachlorobiphenyls (BZ-90 + BZ-101 + BZ-113)	EPA 1668C_2010	1,3,4
Coelution - Tetrachlorobiphenyls (BZ-40 + BZ-41 + BZ-71)	EPA 1668C_2010	1,3,4
Coelution - Tetrachlorobiphenyls (BZ-44 + BZ-47 + BZ-65)	EPA 1668C_2010	1,3,4
Coelution - Tetrachlorobiphenyls (BZ-45 + BZ-51)	EPA 1668C_2010	1,3,4
Coelution - Tetrachlorobiphenyls (BZ-49 + BZ-69)	EPA 1668C_2010	1,3,4
Coelution - Tetrachlorobiphenyls (BZ-50 + BZ-53)	EPA 1668C_2010	1,3,4
Coelution - Tetrachlorobiphenyls (BZ-59 + BZ-62 + BZ-75)	EPA 1668C_2010	1,3,4
Coelution - Tetrachlorobiphenyls (BZ-61 + BZ-70 + BZ-74 + BZ-76)	EPA 1668C_2010	1,3,4
Coelution - Trichlorobiphenyls (BZ-18 + BZ-30)	EPA 1668C_2010	1,3,4
Coelution - Trichlorobiphenyls (BZ-20 + BZ-28)	EPA 1668C_2010	1,3,4
Coelution - Trichlorobiphenyls (BZ-21 + BZ-33)	EPA 1668C_2010	1,3,4
Coelution - Trichlorobiphenyls (BZ-26 + BZ-29)	EPA 1668C_2010	1,3,4
Coelution-Hexachlorbiphenyl (137 + 164)	EPA 1668C_2010	1,3,4
Coelution-Pentachlorobiphenyl (BZ 85 + 110 + 115 + 116+ 117)	EPA 1668C_2010	1,3,4
Coelution-Pentachlorobiphenyl (BZ 93 + 98 + 100 + 102)	EPA 1668C_2010	1,3,4
Decachlorobiphenyl (BZ-209)	EPA 1668C_2010	1,3,4
1,2,3,4-Tetrachlorobenzene	EPA 1699_2007	6
1,2,4,5-Tetrachlorobenzene	EPA 1699_2007	6
2,4'-DDD	EPA 1699_2007	2
2,4'-DDE	EPA 1699_2007	2
2,4'-DDT	EPA 1699_2007	2
4,4'-DDD	EPA 1699_2007	2
4,4'-DDE	EPA 1699_2007	2
4,4'-DDT	EPA 1699_2007	2
Aldrin	EPA 1699_2007	2
alpha-BHC (alpha-Hexachlorocyclohexane)	EPA 1699_2007	2
alpha-Chlordane	EPA 1699_2007	2
beta-BHC (beta-Hexachlorocyclohexane)	EPA 1699_2007	2

Matrix/Analyte	Method	Notes
Solid and Chemical Materials		
cis-Nonachlor	EPA 1699_2007	2
delta-BHC	EPA 1699_2007	2
Dieldrin	EPA 1699_2007	2
Endosulfan I	EPA 1699_2007	2
Endosulfan II	EPA 1699_2007	2
Endosulfan sulfate	EPA 1699_2007	2
Endrin	EPA 1699_2007	2
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	EPA 1699_2007	2
gamma-Chlordane	EPA 1699_2007	2
Heptachlor	EPA 1699_2007	2
Heptachlor epoxide	EPA 1699_2007	2
Hexachlorobenzene	EPA 1699_2007	6
Methoxychlor	EPA 1699_2007	2
Mirex	EPA 1699_2007	2
Octachlorostyrene	EPA 1699_2007	6
Oxychlordane	EPA 1699_2007	6
Parlar-26	EPA 1699_2007	6
Parlar-50	EPA 1699_2007	6
Parlar-62	EPA 1699_2007	6
Pentachlorobenzene	EPA 1699_2007	6
trans-Nonachlor	EPA 1699_2007	2
1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	EPA 8290A_1_(2/07)	1,2,3,4
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	EPA 8290A_1_(2/07)	1,2,3,4
1,2,3,4,6,7,8-Hpcdd	EPA 8290A_1_(2/07)	1,2,3,4
1,2,3,4,6,7,8-Hpcdf	EPA 8290A_1_(2/07)	1,2,3,4
1,2,3,4,7,8,9-Hpcdf	EPA 8290A_1_(2/07)	1,2,3,4
1,2,3,4,7,8-Hxcdd	EPA 8290A_1_(2/07)	1,2,3,4
1,2,3,4,7,8-Hxcdf	EPA 8290A_1_(2/07)	1,2,3,4
1,2,3,6,7,8-Hxcdd	EPA 8290A_1_(2/07)	1,2,3,4
1,2,3,6,7,8-Hxcdf	EPA 8290A_1_(2/07)	1,2,3,4
1,2,3,7,8,9-Hxcdd	EPA 8290A_1_(2/07)	1,2,3,4
1,2,3,7,8,9-Hxcdf	EPA 8290A_1_(2/07)	1,2,3,4
1,2,3,7,8-Pecdd	EPA 8290A_1_(2/07)	1,2,3,4
1,2,3,7,8-Pecdf	EPA 8290A_1_(2/07)	1,2,3,4
2,3,4,6,7,8-Hxcdf	EPA 8290A_1_(2/07)	1,2,3,4
2,3,4,7,8-Pecdf	EPA 8290A_1_(2/07)	1,2,3,4
2,3,7,8-TCDD	EPA 8290A_1_(2/07)	1,2,3,4

Matrix/Analyte	Method	Notes
Solid and Chemical Materials		
2,3,7,8-TCDF	EPA 8290A_1_(2/07)	1,2,3,4
Hpcdd, total	EPA 8290A_1_(2/07)	1,2,3,4
Hpcdf, total	EPA 8290A_1_(2/07)	1,2,3,4
Hxcdd, total	EPA 8290A_1_(2/07)	1,2,3,4
Hxcdf, total	EPA 8290A_1_(2/07)	1,2,3,4
Pecdd, total	EPA 8290A_1_(2/07)	1,2,3,4
Pecdf, total	EPA 8290A_1_(2/07)	1,2,3,4
TCDD, total	EPA 8290A_1_(2/07)	1,2,3,4
TCDF, total	EPA 8290A_1_(2/07)	1,2,3,4

Accredited Parameter Note Detail

1) Accreditation is based in part on recognition of Louisiana DEQ accreditation. 2) Accreditation based in part on recognition of New Jersey NELAP accreditation.3) Includes water.4) Not for NPDES.(5) Limited to water.(6) Accreditation is based in part on recognition of CALA accreditation.

Rebecca Wood

Authentication Signature
Rebecca Wood, Lab Accreditation Unit Supervisor

06/30/2022

Date

Canadian Association for Laboratory Accreditation Inc.

CALA

Certificate of Accreditation

ALS Environmental (Burlington)
ALS Canada Ltd.
1435 Norjohn Court, Unit 1
Burlington, Ontario

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

Accreditation No.: A3508
Issued On: December 21, 2020
Accreditation Date: April 10, 2012
Expiry Date: June 21, 2023

Andrew M. Adams
President & CEO

CALA

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY

Is hereby granting a Louisiana Environmental Laboratory Accreditation to

ALS Environmental Burlington - CANADA
1435 Norjohn Ct Unit 1
Burlington, Canada L7L 0E6

Agency Interest No. 199920
Activity No. ACC20220002

According to the Louisiana Administrative Code, Title 33, Part I, Subpart 3, LABORATORY ACCREDITATION, the State of Louisiana formally recognizes that this laboratory is technically competent to perform the environmental analyses listed on the scope of accreditation detailed in the attachment.

The laboratory agrees to perform all analyses listed on this scope of accreditation according to the Part I, Subpart 3 requirements and agrees to adapt to any changes in the requirements. It also acknowledges that continued accreditation is dependent on successful ongoing compliance with the applicable requirements of Part I and the 2009 TNI Standard by which the laboratory was assessed. Please contact the Department of Environmental Quality, Louisiana Environmental Laboratory Accreditation Program (LELAP) to verify the laboratory's scope of accreditation and accreditation status.

Accreditation by the State of Louisiana is not an endorsement or a guarantee of validity of the data generated by the laboratory. Accreditation of the environmental laboratory does not imply that a product, process, system, or person is approved by LELAP. To be accredited initially and maintain accreditation, the laboratory agrees to participate in two single-blind, single-concentration PT studies, where available, per year for each field of testing for which it seeks accreditation or maintains accreditation as required in LAC 33:I.4711.

Tonya Landry
Administrator
Public Participation and Permit Support Services Division

Issued Date: 6/24/2022

Effective Date: July 1, 2022
Expiration Date: June 30, 2023
Certificate Number: 05064

The State of Washington Department of Ecology

ALS Environmental - Burlington

Burlington, ON

has complied with provisions set forth in Chapter 173-50 WAC and is hereby recognized by the Department of Ecology as an ACCREDITED LABORATORY for the analytical parameters listed on the accompanying Scope of Accreditation.

This certificate is effective December 28, 2021 and shall expire December 27, 2022.

Witnessed under my hand on January 04, 2022.

Rebecca Wood
Lab Accreditation Unit Supervisor

Laboratory ID
C994

PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Laboratory of:

ALS Canada LTD

1435 Norjohn Court Unit 1, Burlington, Ontario L7L 0E6

(Hereinafter called the Organization) and hereby declares that Organization has met the requirements of ISO/IEC 17025:2017 General Requirements for the competence of Testing and Calibration Laboratories and U.S. Department of Energy (DOE) Consolidated Audit Program (DOECAP) requirements identified within the DoD/DOE Quality Systems Manual (DoD/DOE QSM) Version 5.3 May 2019 and is accredited in accordance with the:

United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP)

This accreditation demonstrates technical competence for the defined scope:

Environmental Testing

(As detailed in the supplement)

Accreditation claims for such testing and/or calibration services shall only be made from addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation body's duty to observe and comply with the said rules.

For PJLA:

Tracy Szerszen
President

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
March 19, 2012	June 11, 2020	July 31, 2022
Revision Date:	*Accreditation No.:*	*Certificate No.:*
August 20, 2020	72205	L20-339-R1

Perry Johnson Laboratory Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlabs.com

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

ALS Canada LTD

1435 Norjohn Court Unit 1, Burlington, Ontario L7L 0E6
Contact Name: Farhad Khalili Phone: 905-340-0825

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,4,6,7,8-HpCDD
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,4,6,7,8-HpCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,4,7,8,9-HpCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,4,7,8-HxCDD
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,4,7,8-HxCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,6,7,8-HxCDD
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,6,7,8-HxCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,7,8,9-HxCDD
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,7,8,9-HxCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,7,8-PeCDD
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,7,8-PeCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	2,3,4,6,7,8-HxCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	2,3,4,7,8-PeCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	2,3,7,8-TCDD
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	2,3,7,8-TCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	OCDD
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	OCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	Total-HpCDD
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	Total-HpCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	Total-HxCDD
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	Total-HxCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	Total-PeCDD
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	Total-PeCDF
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	Total-TCDD
Aqueous	EPA 1613B/EPA 8290A/BU-TM-1107/BU-TM-1110	HRMS	Total-TCDF
Aqueous	EPA 1668A/BU-TM-1105/BU-TM-1110	HRMS	PCB 107/124
Aqueous	EPA 1668A/BU-TM-1105/BU-TM-1110	HRMS	PCB 108/119/86/97/125/87
Aqueous	EPA 1668A/BU-TM-1105/BU-TM-1110	HRMS	PCB 109
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 1
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 10
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 100/93/102/98
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 103
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 104
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 105
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 106
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 11

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

ALS Canada LTD

1435 Norjohn Court Unit 1, Burlington, Ontario L7L 0E6
Contact Name: Farhad Khalili Phone: 905-340-0825

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 111
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 112
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 113/90/101
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 114
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 117/116/85/110/115
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 118
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 120
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 121
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 122
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 123
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 126
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 127
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 128/166
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 13/12
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 130
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 131
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 132
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 133
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 134/143
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 136
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 137/164
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 138/163/129
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 139/140
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 14
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 141
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 142
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 144
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 145
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 146
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 147/149
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 148
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 15
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 150
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 151/135
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 152
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 154

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

ALS Canada LTD

1435 Norjohn Court Unit 1, Burlington, Ontario L7L 0E6
Contact Name: Farhad Khalili Phone: 905-340-0825

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 155
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 156/157
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 158
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 159
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 16
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 160
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 161
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 162
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 165
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 167
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 168/153
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 169
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 17
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 170
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 171/173
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 172
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 174
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 175
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 176
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 177
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 178
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 179
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 180/193
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 181
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 182
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 183
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 184
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 185
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 186
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 187
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 188
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 189
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 19
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 190
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 191
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 192

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

ALS Canada LTD

1435 Norjohn Court Unit 1, Burlington, Ontario L7L 0E6
Contact Name: Farhad Khalili Phone: 905-340-0825

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 194
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 195
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 196
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 197
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 198/199
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 2
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 200
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 201
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 202
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 203
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 204
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 205
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 206
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 207
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 208
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 209
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 21/33
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 22
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 23
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 24
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 25
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 27
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 28/20
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 29/26
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 3
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 30/18
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 31
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 32
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 34
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 35
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 36
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 37
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 38
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 39
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 4
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 41/71/40

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

ALS Canada LTD

1435 Norjohn Court Unit 1, Burlington, Ontario L7L 0E6
Contact Name: Farhad Khalili Phone: 905-340-0825

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 42
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 43
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 44/47/65
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 45/51
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 46
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 48
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 5
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 50/53
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 52
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 54
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 55
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 56
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 57
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 58
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 59/62/75
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 6
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 60
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 61/70/74/76
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 63
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 64
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 66
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 67
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 68
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 69/49
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 7
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 72
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 73
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 77
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 78
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 79
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 8
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 80
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 81
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 82
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 83/99
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 84

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

ALS Canada LTD

1435 Norjohn Court Unit 1, Burlington, Ontario L7L 0E6
Contact Name: Farhad Khalili Phone: 905-340-0825

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 88/91
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 89
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 9
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 92
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 94
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 95
Aqueous	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 96
Aqueous	EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 107
Aqueous	EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 108/124
Aqueous	EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 109/119/86/97/125/87
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,4,6,7,8-HpCDD
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,4,6,7,8-HpCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,4,7,8,9-HpCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,4,7,8-HxCDD
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,4,7,8-HxCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,6,7,8-HxCDD
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,6,7,8-HxCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,7,8,9-HxCDD
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,7,8,9-HxCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,7,8-PeCDD
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	1,2,3,7,8-PeCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	2,3,4,6,7,8-HxCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	2,3,4,7,8-PeCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	2,3,7,8-TCDD
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	2,3,7,8-TCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	OCDD

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

ALS Canada LTD

1435 Norjohn Court Unit 1, Burlington, Ontario L7L 0E6
Contact Name: Farhad Khalili Phone: 905-340-0825

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	OCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	Total-HpCDD
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	Total-HpCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	Total-HxCDD
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	Total-HxCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	Total-PeCDD
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	Total-PeCDF
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	Total-TCDD
Air/solids/tissues	EPA 1613B/EPA 8290A/EPA 23/TO-9A/BU-TM-1107/BU-TM-1110	HRMS	Total-TCDF

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

ALS Canada LTD

1435 Norjohn Court Unit 1, Burlington, Ontario L7L 0E6
Contact Name: Farhad Khalili Phone: 905-340-0825

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Solids/Tissue/Air	EPA 1668A/BU-TM-1105/BU-TM-1110	HRMS	PCB 107/124
Solids/Tissue/Air	EPA 1668A/BU-TM-1105/BU-TM-1110	HRMS	PCB 108/119/86/97/125/87
Solids/Tissue/Air	EPA 1668A/BU-TM-1105/BU-TM-1110	HRMS	PCB 109
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 1
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 10
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 100/93/102/98
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 103
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 104
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 105
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 106
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 11
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 111
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 112
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 113/90/101
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 114
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 117/116/85/110/115
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 118
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 120
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 121
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 122
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 123
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 126
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 127
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 128/166
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 13/12
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 130
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 131
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 132
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 133
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 134/143
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 136
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 137/164
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 138/163/129
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 139/140
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 14
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 141

Certificate of Accreditation: Supplement

ISO/IEC 17025:2005 and DoD-ELAP

ALS Canada LTD

1435 Norjohn Court Unit 1, Burlington, Ontario L7L 0E6
Contact Name: Farhad Khalili Phone: 905-340-0825

Accreditation is granted to the facility to perform the following testing:

Matrix	Standard/Method	Technology	Analyte
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 142
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 144
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 145
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 146
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 147/149
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 148
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 15
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 150
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 151/135
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 152
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 154
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 155
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 156/157
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 158
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 159
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 16
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 160
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 161
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 162
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 165
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 167
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 168/153
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 169
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 17
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 170
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 171/173
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 172
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 174
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 175
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 176
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 177
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 178
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 179
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 180/193
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 181
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 182

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ALS Canada LTD

1435 Norjohn Court Unit 1, Burlington, Ontario L7L 0E6
Contact Name: Farhad Khalili Phone: 905-340-0825

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Matrix	Standard/Method	Technology	Analyte
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 183
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 184
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 185
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 186
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 187
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 188
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 189
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 19
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 190
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 191
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 192
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 194
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 195
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 196
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 197
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 198/199
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 2
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 200
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 201
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 202
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 203
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 204
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 205
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 206
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 207
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 208
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 209
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 21/33
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 22
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 23
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 24
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 25
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 27
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 28/20
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 29/26
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 3

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Matrix	Standard/Method	Technology	Analyte
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 30/18
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 31
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 32
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 34
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 35
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 36
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 37
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 38
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 39
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 4
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 41/71/40
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 42
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 43
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 44/47/65
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 45/51
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 46
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 48
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 5
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 50/53
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 52
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 54
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 55
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 56
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 57
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 58
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 59/62/75
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 6
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 60
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 61/70/74/76
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 63
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 64
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 66
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 67
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 68
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 69/49
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 7

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Matrix	Standard/Method	Technology	Analyte
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 72
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 73
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 77
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 78
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 79
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 8
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 80
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 81
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 82
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 83/99
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 84
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 88/91
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 89
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 9
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 92
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 94
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 95
Solids/Tissue/Air	EPA 1668A/EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 96
Solids/Tissue/Air	EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 107
Solids/Tissue/Air	EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 108/124
Solids/Tissue/Air	EPA 1668C/BU-TM-1105/BU-TM-1110	HRMS	PCB 109/119/86/97/125/87

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Matrix	Standard/Method	Technology	Analyte
Aqueous	EPA 3510C/BU-TM-1110	Separatory Funnel	PCDD/PCDF/PCB
Aqueous/Solids/Air/Tissue	EPA 3610C/BU-TM-1110	Alumina Cleanup	PCDD/PCDF/PCB
Aqueous/Solids/Air/Tissue	EPA 3620B/BU-TM-1110	Florisil Cleanup	PCDD/PCDF/PCB
Aqueous/Solids/Air/Tissue	EPA 3630C/BU-TM-1110	Silica Gel Cleanup	PCDD/PCDF/PCB
Aqueous/Solids/Air/Tissue	EPA 8290/EPA 1613/EPA 1668/BU-TM-1110	Carbon Cleanup	PCDD/PCDF/PCB
Solids/Air/Tissue	EPA 3540C/BU-TM-1110	Soxhlet	PCDD/PCDF/PCB

Agenda Sheet for City Council Meeting of: 10/10/2022		**Date Rec'd**	9/28/2022
		Clerk's File #	OPR 2022-0712
		Renews #	
Submitting Dept	WASTEWATER MANAGEMENT	**Cross Ref #**	
Contact Name/Phone	MIKE CANNON 625-4642	**Project #**	
Contact E-Mail	MCANNON@SPOKANECITY.ORG	**Bid #**	
Agenda Item Type	Contract Item	**Requisition #**	
Agenda Item Name	4320-CONTRACT AWARD TO CORROSION COMPANIES FOR BATCH TANK		

Agenda Wording

Consent to award Corrosion Companies hypochloride tank repairs and modifications. Total for the two estimates is $72,859.00. Term of agreement is October 1, 2022 and ends on December 31, 2022.

Summary (Background)

RPWRF's hypochloride tanks, used to store disinfection chemicals, were installed nearly 20 years ago and are in need of maintenance. There are three tanks. Tank #3 that was leaking has been previously repaired by Corrosion Companies in 2021. Tank #2 is now leaking and needs repair and recoating. Corrosion Companies is the lowest responsible bidder for this repair and rehabilitation work.

Lease? NO Grant related? NO Public Works? YES

Fiscal Impact		**Budget Account**
Expense	**$** $72,859.00	**#** 4320.43230.35148.54803
Select	**$**	**#**
Select	**$**	**#**
Select	**$**	**#**

Approvals		**Council Notifications**	
Dept Head	GENNETT, RAYLENE	**Study Session\Other**	PIES 9/26/22
Division Director	FEIST, MARLENE	**Council Sponsor**	CM Kinnear
Finance	ALBIN-MOORE, ANGELA	**Distribution List**	
Legal	HARRINGTON,	hbarnhart@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	kkeck@spokanecity.org	
Additional Approvals		mhughes@spokanecity.org	
Purchasing		Tax & Licenses	
		rgraybeal@spokanecity.org	
		lmartelle@spokanecity.org	
		cpetershmidt@spokanecity.org	

Continuation of Wording, Summary, Budget, and Distribution

Agenda Wording

Summary (Background)

Also, the Next Level of Treatment (NLT) batch tanks - chemical tanks used to mix, store, and recycle the cleaning chemicals used to maintain the membranes - need some interior piping to be modified to provide better functionality to that system. The contract for these modifications were bid separately, and again Corrosion Companies provided the lowest responsible bid. While they are separate projects, and the individual projects will each be under $50,000, the materials, skills, and craftmanship are similar enough that the two contracts will be combined into a single contract that will exceed $50,000.

Fiscal Impact		Budget Account
Select	$	#
Select	$	#

Distribution List	
admin@ccifrp.com	

Committee Agenda Sheet

Public Infrastructure, Environment & Sustainability

Submitting Department	Public Works & Utilities - Riverside Park Water Reclamation Facility
Contact Name & Phone	Chris Peterschmidt
Contact Email	cpeterschmidt@spokanecity.org
Council Sponsor(s)	CM Kinnear
Select Agenda Item Type	☐ Consent ☐ Discussion Time Requested: _____
Agenda Item Name	RPWRF Hypo Tanks Repair and Modification
Summary (Background)	RPWRF's hypochloride tanks, used to store disinfection chemicals, were installed nearly 20 years ago and are in need of maintenance. There are three tanks. Tank #3 that was leaking has been previously repaired by Corrosion Companies in 2021. Tank #2 is now leaking and needs repair and recoating. Corrosion Companies is the lowest responsible bidder for this repair and rehabilitation work. Also, the Next Level of Treatment (NLT) batch tanks - chemical tanks used to mix, store, and recycle the cleaning chemicals used to maintain the membranes - need some interior piping to be modified to provide better functionality to that system. The contract for these modifications were bid separately, and again Corrosion Companies provided the lowest responsible bid. While they are separate projects, and the individual projects will each be under $50,000, the materials, skills, and craftmanship are similar enough that the two contracts will be combined into a single contract that will exceed $50,000.
Proposed Council Action & Date:	Council Consent Agenda October 10th, 2022

Fiscal Impact:

Total Cost: $72,859.00

Approved in current year budget? ☐ Yes ☐ No ☐ N/A

Funding Source ☐ One-time ☐ Recurring

Specify funding source: Department

Expense Occurrence ☐ One-time ☐ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts
What impacts would the proposal have on historically excluded communities? N/A
How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities? N/A
How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution? N/A
Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others? City of Spokane Purchasing Policy.

City Clerk's No. 2022-0712

City of Spokane

PUBLIC WORKS AGREEMENT

Title: MODIFICATION AND REPAIR OF ABOVE GROUND HYDRO (BLEACH) TANKS

This Agreement is made and entered into by and between the **CITY OF SPOKANE** as ("City"), a Washington municipal corporation, and **CORROSION COMPANIES**, whose address is P.O. Box 1199, Washougal, Washington, 98671 as ("Contractor"), individually hereafter referenced as a "party", and together as the "parties".

WHEREAS, the purpose of this Contract is to perform a Modification and Repair of Above Ground Hydro (Bleach) Tanks; and

WHEREAS, the Contractor has been selected through the MRSC Small Works Roster.

NOW, THEREFORE, in consideration of the terms, conditions, covenants and performance of the Scope of Work contained herein, the City and Contractor mutually agree as follows:

1. TERM OF AGREEMENT.
This Contract shall begin on October 1, 2022 and shall end on December 31, 2022, unless amended by written agreement or terminated earlier under the provisions.

2. SCOPE OF WORK.
The Contractor's General Scope of Work for this Contract is described in the Company's Estimate Nos. 22-F77 and 22-F99, attached as Exhibit C, and made a part of this Agreement. In the event of a conflict or discrepancy in the Agreement documents, this City Public Works Agreement controls.

The Work is subject to City review and approval. The Contractor shall confer with the City periodically and prepare and present information and materials (e.g. detailed outline of completed Work) requested by the City to determine the adequacy of the Work or Contractor's progress.

3. COMPENSATION / PAYMENT.
Total compensation for Contractor's services under this Contract shall be a maximum amount not to exceed **SEVENTY-TWO THOUSAND EIGHT HUNDRED FIFTY-NINE AND NO/100 DOLLARS** (**$72,859.00**), not including applicable tax, unless modified by a written amendment to this Contract. This is the maximum amount to be paid under this Contract for the work described in Section 2 above, and shall not be exceeded without the prior written authorization of the City in the form of an executed amendment to this Contract. Thirty-Five Percent (35%) shall be paid up-front for Companies purchase of parts.

The Contractor will send its applications for payment to the Riverside Park Water Reclamation Facility, 4401 North Aubrey L. White Parkway, Spokane, Washington 99205-3939. All invoices should include the City Clerk's File No. "OPR XXXX-XXXX" and an approved L & I Intent to Pay

Prevailing Wage number. The final invoice should include an approved Affidavit of Wages Paid number. Payment will not be made without this documentation included on the invoice.

4. CONTRACT DOCUMENTS.

The contract documents are this Contract, the Contractor's completed bid proposal form, contract provisions, contract plans, standard specifications, standard plans, addenda, various certifications and affidavits, supplemental agreements, change orders, and subsurface boring logs (if any). Federal and state requirements and the terms of this Contract, respectively, supersede other inconsistent provisions. These contract documents are on file at the Riverside Park Water Reclamation Facility, and are incorporated into this Contract by reference, as if they were set forth at length.

5. STATEMENT OF INTENT TO PAY PREVAILING WAGES TO BE POSTED.

The Contractor and each subcontractor required to pay the prevailing rate of wages shall post in a location readily visible at the job site: (1) a copy of a "Statement of Intent to Pay Prevailing Wages" approved by the industrial statistician of the Washington State Department of Labor and Industries (L & I); and (2) the address and telephone number of the industrial statistician of the Department of Labor and Industries where a complaint or inquiry concerning prevailing wages may be made.

6. STATE PREVAILING WAGES.

The Contractor and all subcontractors will submit a "Statement of Intent to Pay Prevailing Wages" certified by the industrial statistician of the Department of Labor and Industries, prior to any payments. The "Statement of Intent to Pay Prevailing Wages" shall include: (1) the Contractor's registration number; and (2) the prevailing wages under RCW 39.12.020 and the number of workers in each classification. Each voucher claim submitted by the Contractor for payment on a project estimate shall state that the prevailing wages have been paid in accordance with the "Statement(s) of Intent to Pay Prevailing Wages" on file with the City. Prior to the payment of funds held under RCW 60.28, the Contractor and subcontractors must submit an "Affidavit of Wages Paid" certified by the industrial statistician.

7. RETAINAGE IN LIEU OF BOND.

The Contractor may not commence work until it obtains all insurance, permits and bonds required by the contract documents and applicable law. In lieu of a one hundred percent (100%) payment/performance bond, in accord with RCW 39.08.010, the City shall retain ten percent (10%) of the contract sum for thirty (30) days after date of final acceptance or until receipt of required releases and settlement of any liens filed under Chapter 60.28 RCW, whichever is later.

8. PUBLIC WORKS REQUIREMENTS.

The Contractor and each subcontractor are required to fulfill the Department of Labor and Industries Public Works and Prevailing Wage Training Requirement under RCW 39.04.350. The contractor must verify responsibility criteria for each first tier subcontractor, and a subcontractor of any tier that hires other subcontractors must verify the responsibility criteria listed in RCW 39.04.350(1) for each of its subcontractors. Verification shall include that each subcontractor, at the time of subcontract execution, meets the responsibility criteria. This verification requirement, as well as responsibility criteria, must be included in every public works contract and subcontract of every tier.

9. TAXES, FEES AND LICENSES.

A. Contractor shall pay and maintain in current status, all necessary licenses, fees, assessments, permit charges, etc. necessary to conduct the work included under this Contract. It is the Contractor's sole responsibility to monitor and determine changes or the enactment of any subsequent requirements for said fees, assessments, or changes and to immediately comply.

B. The cost of any permits, licenses, fees, etc. arising as a result of the projects included in this Contract shall be included in the project budgets.

10. CITY OF SPOKANE BUSINESS LICENSE.

Section 8.01.070 of the Spokane Municipal Code states that no person may engage in business with the City without first having obtained a valid annual business registration. The Contractor shall be responsible for contacting the State of Washington Business License Services at www.dor.wa.gov or 360-705-6741 to obtain a business registration. If the Contractor does not believe it is required to obtain a business registration, it may contact the City's Taxes and Licenses Division at (509) 625-6070 to request an exemption status determination.

11. SOCIAL EQUITY REQUIREMENTS / NON-DISCRIMINATION.

No individual shall be excluded from participation in, denied the benefit of, subjected to discrimination under, or denied employment in the administration of or in connection with this Contract because of age, sex, race, color, religion, creed, marital status, familial status, sexual orientation including gender expression or gender identity, national origin, honorably discharged veteran or military status, the presence of any sensory, mental or physical disability, or use of a service animal by a person with disabilities. The Contractor agrees to comply with, and to require that all subcontractors comply with, federal, state and local nondiscrimination laws, including but not limited to: the Civil Rights Act of 1964, the Rehabilitation Act of 1973, the Age Discrimination in Employment Act, and the American's With Disabilities Act, to the extent those laws are applicable.

12. DEBARMENT AND SUSPENSION.

The Contractor has provided its certification that it is in compliance with and shall not contract with individuals or organizations which are debarred, suspended, or otherwise excluded from or ineligible from participation in Federal Assistance Programs under Executive Order 12549 and "Debarment and Suspension", codified at 29 CFR part 98.

13. INDEMNIFICATION.

The Contractor agrees to defend, indemnify and hold the City harmless from any and all claims, demands, losses and liabilities to or by third parties arising from, resulting from or connected with Work performed or to be performed under this Contract by Contractor, its agents or employees to the fullest extent permitted by law. Contractor's duty to indemnify the City shall not apply to liability for damages arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of the City, its agents or employees. Contractor's duty to indemnify the City for liability for damages arising out of bodily injury to persons or damage to property caused by or resulting from the concurrent negligence of (a) the City or its agents or employees, and (b) Contractor or agents or employees, shall apply only to the extent of negligence of the Contractor or its agents or employees. Contractor's duty to defend, indemnify and hold the City harmless shall include, as to all claims, demands, losses and liability to which it applies, the City's personnel related costs, reasonable attorneys' fees, court costs and all other claim related expenses. The Contractor specifically assumes potential liability for actions brought by the Contractor's own employees against the City and, solely for the purpose of this indemnification and defense, the Contractor specifically waives any immunity under the state industrial insurance law, or Title 51 RCW. The Contractor recognizes that this waiver was specifically entered into pursuant to the provisions of RCW 4.24.115 and was the subject of mutual negotiation. The indemnification provided for in this section shall survive any termination or expiration of this Contract.

14. INSURANCE.

During the period of the Contract, the Contractor shall maintain in force at its own expense, each insurance noted below with companies or through sources approved by the State Insurance Commissioner pursuant to Title 48 RCW:

A. **Worker's Compensation Insurance** in compliance with RCW 51.12.020, which requires subject employers to provide workers' compensation coverage for all their subject workers and Employer's Liability Insurance in the amount of $1,000,000;

B. **General Liability Insurance** on an occurrence basis, with a combined single limit of not less than $1,000,000 each occurrence for bodily injury and property damage. It shall include contractual liability coverage for the indemnity provided under this Contract. It shall provide that the City, its officers and employees are additional insureds but only with respect to the Contractor's services to be provided under this Contract;

i. Acceptable **supplementary Umbrella insurance** coverage combined with Company's General Liability insurance policy must be a minimum of $1,500,000, in order to meet the insurance coverage limits required in this Contract; and

C. **Automobile Liability Insurance** with a combined single limit, or the equivalent of not less than $1,000,000 each accident for bodily injury and property damage, including coverage for owned, hired and non-owned vehicles; and

D. **Property Insurance** if materials and supplies are furnished by the Contractor. The amount of the insurance coverage shall be the value of the materials and supplies of the completed value of improvement. Hazard or XCU (explosion, collapse, underground) insurance should be provided if any hazard exists.

There shall be no cancellation, material change, reduction of limits or intent not to renew the insurance coverage(s) without thirty (30) days written notice from the Consultant or its insurer(s) to the City. As evidence of the insurance coverage(s) required by this Agreement, the Consultant shall furnish acceptable Certificates of Insurance (COI) to the City at the time it returns this signed Agreement. The certificate shall specify the City of Spokane as "Additional Insured" specifically for Consultant's services under this Agreement, as well as all of the parties who are additional insureds, and include applicable policy endorsements, the thirty (30) day cancellation clause, and the deduction or retention level. The Consultant shall be financially responsible for all pertinent deductibles, self-insured retentions, and/or self-insurance.

15. SUBCONTRACTOR RESPONSIBILITY.

A. The Contractor must verify responsibility criteria for each first tier subcontractor, and a subcontractor of any tier that hires other subcontractors must verify responsibility criteria for each of its subcontractors. Verification shall include that each subcontractor, at the time of subcontract execution, meets the responsibility criteria listed in RCW 39.04.350. The responsibility criteria are listed in the request for bids document. The Contractor shall include the language of this section in each of its first tier subcontracts, and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the City, the Contractor shall promptly provide documentation to the City demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this section apply to all subcontractors regardless of tier.

B. At the time of subcontract execution, the Contractor shall verify that each of its first tier subcontractors meets the following bidder responsibility criteria:

1. Have a current certificate of registration in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;

2. Have a current Washington Unified Business Identifier (UBI) number;

3. If applicable, have:

a. Have Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;

b. A Washington Employment Security Department number, as required in Title 50 RCW;

c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;

d. An electrical contractor license, if required by Chapter 19.28 RCW;

e. An elevator contractor license, if required by Chapter 70.87 RCW.

4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3).

16. INDEPENDENT CONTRACTOR.

The Contractor is an independent Contractor. This Contract does not intend the Contractor to act as a City employee. The City has neither direct nor immediate control over the Contractor nor the right to control the manner or means by which the Contractor works. Neither the Contractor nor any Contractor employee shall be an employee of the City. This Contract prohibits the Contractor to act as an agent or legal representative of the City. The Contractor is not granted express or implied rights or authority to assume or create any obligation or responsibility for or in the name of the City, or to bind the City. The City is not liable for or obligated to pay sick leave, vacation pay, or any other benefit of employment, nor to pay social security or other tax that may arise from employment. The Contractor shall pay all income and other taxes as due.

17. ASSIGNMENT AND SUBCONTRACTING.

The Contractor shall not assign or subcontract its obligations under this Contract without the City's written consent, which may be granted or withheld in the City's sole discretion. Any subcontract made by the Contractor shall incorporate by reference this Contract, except as otherwise provided. The Contractor shall ensure that all subcontractors comply with the obligations and requirements of the subcontract. The City's consent to any assignment or subcontract does not release the Contractor from liability or any obligation within this Contract, whether before or after City consent, assignment or subcontract.

18. TERMINATION.

Either party may terminate this Contract, with or without cause, by ten (10) days written notice to the other party. In the event of such termination, the City shall pay the Contractor for all work previously authorized and performed prior to the termination date.

19. STANDARD OF PERFORMANCE.

The standard of performance applicable to Contractor's services will be the degree of skill and diligence normally employed by professional contractors in the region performing the same or similar Contracting services at the time the work under this Contract are performed.

20. ANTI KICK-BACK.

No officer or employee of the City of Spokane, having the power or duty to perform an official act or action related to this Contract shall have or acquire any interest in the Contract, or have solicited, accepted or granted a present or future gift, favor, service or other thing of value from or to any person involved in this Contract.

21. CONSTRUAL.

The Contractor acknowledges receipt of a copy of the Contract documents and agrees to comply with them. The silence or omission in the Contract documents concerning any detail required for the proper execution and completion of the work means that only the best general practice is to prevail and that only material and workmanship of the best quality are to be used. This Contract shall be construed neither in favor of nor against either party.

22. CONTRACTOR'S ACKNOWLEDGEMENT AND WARRANTY.

The Contractor acknowledges that it has visited the site of the work, has examined it, and is qualified to perform the work required by this Contract.

The Contractor guarantees and warranties all work, labor and materials under this Contract shall be in accord with the Contract documents. If any unsatisfactory condition or defect develops within that time, the Contractor will immediately place the work in a condition satisfactory to the City and repair all damage caused by the condition or defect. The Contractor will repair or restore to the City's satisfaction, in accordance with the contract documents and at its expense, all property damaged by his performance under this Contract. This warranty is in addition to any manufacturers' or other warranty in the Contract documents.

23. MISCELLANEOUS PROVISIONS.

A. **Amendments/Modifications**: The City may modify this Contract and order changes in the work whenever necessary or advisable. The Contractor will accept modifications when ordered in writing by the City, and the Contract time and compensation will be adjusted accordingly.

B. The Contractor, at no expense to the City, shall comply with all laws of the United States and Washington, the Charter and ordinances of the City of Spokane; and rules, regulations, orders and directives of their administrative agencies and officers.

C. This Contract shall be construed and interpreted under the laws of Washington. The venue of any action brought shall be in a court of competent jurisdiction, located in Spokane County, Washington.

D. **Captions**: The titles of sections or subsections are for convenience only and do not define or limit the contents.

E. **Severability**: If any term or provision is determined by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Contract shall not be affected, and each term and provision shall be valid and enforceable to the fullest extent permitted by law.

F. **Waiver**: No covenant, term or condition or the breach shall be deemed waived, except by written consent of the party against whom the waiver is claimed, and any waiver of the breach of any covenant, term or condition shall not be deemed a waiver of any preceding or succeeding breach of the same or any other covenant, term of condition. Neither the acceptance by the City of any performance by the Contractor after the time the same shall have become due nor payment to the Contractor for any portion of the Work shall constitute a waiver by the City of the breach or default of any covenant, term or condition unless otherwise expressly agreed to by the City in writing.

G. **Entire Agreement**: This document along with any exhibits and all attachments, and subsequently issued addenda, comprises the entire agreement between the City and the Contractor. If conflict occurs between Contract documents and applicable laws, codes, ordinances or regulations, the most stringent or legally binding requirement shall govern and be considered a part of this Contract to afford the City the maximum benefits.

H. **No personal liability**: No officer, agent or authorized employee of the City shall be personally responsible for any liability arising under this Contract, whether expressed or implied, nor for any statement or representation made or in any connection with this Contract.

I. Under Washington State Law (reference RCW Chapter 42.56, the *Public Records Act* [PRA]) all materials received or created by the City of Spokane in connection with this

Agreement are ***public records*** and are available to the public for viewing via the City Clerk's Records (online) or a valid Public Records Request (PRR).

IN WITNESS WHEREOF, in consideration of the terms, conditions and covenants contained, or attached and incorporated and made a part, the parties have executed this Contract by having legally-binding representatives affix their signatures below.

CORROSION COMPANIES	**CITY OF SPOKANE**
By_____	By_____
Signature Date	Signature Date
_____	_____
Type or Print Name	Type or Print Name
_____	_____
Title	Title
Attest:	Approved as to form:
_____	_____
City Clerk	Assistant City Attorney

Attachments that are part of this Agreement:
Exhibit A – Debarment Certification
Exhibit B – Certification of Compliance with Wage Payment Statutes
Exhibit C – Company's Estimate Nos. 22-F77 and 22-F99

EXHIBIT A

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. The undersigned (i.e., signatory for the Subrecipient / Contractor / Consultant) certifies, to the best of its actual knowledge and belief, that its officers and directors:

   a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
   b. Have not within a three-year period preceding this contract been convicted or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice;
   c. Are not presently indicted or otherwise criminally or civilly charged by a government entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and,
   d. Have not within a three-year period preceding this contract had one or more public transactions (federal, state, or local) terminated for cause or default.

2. The undersigned agrees by signing this contract that it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction.

3. The undersigned further agrees by signing this contract that it will include the following clause, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions:

   Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transactions

   1. The lower tier contractor certified, by signing this contract that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

   2. Where the lower tier contractor is unable to certify to any of the statements in this contract, such contractor shall attach an explanation to this contract.

4. I understand that a false statement of this certification may be grounds for termination of the contract.

_____ Name of Subrecipient / Contractor / Consultant (Type or Print)	_____ Program Title (Type or Print)
_____ Name of Certifying Official (Type or Print) _____ Title of Certifying Official (Type or Print)	_____ Signature _____ Date (Type or Print)

EXHIBIT B

Certification of Compliance with Wage Payment Statutes and Washington Department of Labor and Industries Training Requirement

The bidder hereby certifies that, within the three-year period immediately preceding the bid solicitation date (_____), the bidder is not a "willful" violator, as defined in RCW 49.48.082, of any provision of chapters 49.46, 49.48, or 49.52 RCW, as determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction. As of July 1, 2019, have fulfilled the Department of Labor and Industries' Public Works and Prevailing Wage Training Requirement before bidding and/or performing work on public works projects under RCW 39.04.350 and RCW 39.06.020 by either of the following:

1) Received training on the requirements related to public works and prevailing wage under chapter RCW 39.04.350 and chapter 39.12; or
2) Be certified exempt by the Department of Labor and Industries by having completed three or more public work projects and have a had a valid business license in Washington for three or more years.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

_____
Bidder's Business Name

_____
Signature of Authorized Official*

_____
Printed Name

_____
Title

_____ _____ _____
Date City State

Check One:

Sole Proprietorship ☐ Partnership ☐ Joint Venture ☐ Corporation ☐

State of Incorporation, or if not a corporation, State where business entity was formed:

_____

If a co-partnership, give firm name under which business is transacted:

_____

** If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

EXHIBIT C

Corrosion Companies, Inc.
P.O. Box 1199
Washougal, WA 98671 US
+1 3608352171
admin@ccifrp.com
www.CCIFRP.com

Estimate

ADDRESS	SHIP TO
City of Spokane Riverside Park Water Reclamation Facility N Freya St Spokane, Wa 99202 USA	City of Spokane Riverside Park Water Reclamation Facility N Freya St Spokane, Wa 99202 USA

ESTIMATE #	DATE	EXPIRATION DATE
22-F99	09/06/2022	10/06/2022

DATE	ACTIVITY	QTY	RATE	AMOUNT
09/06/2022	**Field Estimate** PH 2 - CIP TANK MODIFICATIONS - Price to include labor, materials and equipment to cut and rotate 90 degree 10" ID Nozzle D and laminate back together per Specifications Estimated @ 3-men (1) shift Price includes confined space safety hole watch by CCI Price includes Scaffolding access JOB WILL BE CONFIRMED UPON RECEIVING 35% DOWN PAYMENT FOR PROCUREMENT OF MATERIALS AND PURCHASE ORDER. Schedule as agreed with City of Spokane Terms: NET 15.	6	4,987.00	29,922.00

Deposit of 35% required to schedule work, unless other arrangements have been made.

We look forward to working with you on this project.

SUBTOTAL	29,922.00
TAX	0.00
TOTAL	**$29,922.00**

Accepted By

Accepted Date

Corrosion Companies, Inc.
P.O. Box 1199
Washougal, WA 98671 US
+1 3608352171
admin@ccifrp.com
www.CCIFRP.com

Estimate

ADDRESS	SHIP TO
City of Spokane Riverside Park Water Reclamation Facility N Freya St Spokane, Wa 99202 USA	City of Spokane Riverside Park Water Reclamation Facility N Freya St Spokane, Wa 99202 USA

ESTIMATE #	DATE	EXPIRATION DATE
22-F77	08/02/2022	09/02/2022

DATE	ACTIVITY	QTY	RATE	AMOUNT
08/02/2022	**Field Estimate** SODIUM HYPOCHLORITE STORAGE TANK ABOVE GROUND TANK RELINE SPECIFICATION - Price to include labor, materials, equipment, travel, motel, per-diem to FRP repair the No.1 sodium hypochlorite storage tank per Brer Technical reline specification Estimated @ 3-men 5 days Monday thru Friday Price includes confined space safety hole watch, JOB WILL BE CONFIRMED UPON RECEIVING 35% DOWN PAYMENT FOR PROCUREMENT OF MATERIALS AND PURCHASE ORDER. Schedule as agreed with City of Spokane Terms: NET 15.	1	42,937.00	42,937.00

Deposit of 35% required to schedule work, unless other arrangements have been made.

We look forward to working with you on this project.

SUBTOTAL	42,937.00
TAX	0.00
TOTAL	**$42,937.00**

Accepted By

Accepted Date

Wire Transfers: Routing 121000248, Acct 6499308150. ACH/Deposit Routing 123006800, Acct 6499308150.
Accounts unpaid within agreed terms subject to Late Fee of 18% APR on unpaid balance.

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	9/28/2022
		Clerk's File #	OPR 2022-0297
		Renews #	
Submitting Dept	CITY ATTORNEY	Cross Ref #	
Contact Name/Phone	LYNDEN SMITHSON 6283	Project #	
Contact E-Mail	LSMITHSON@SPOKANECITY.ORG	Bid #	
Agenda Item Type	Contract Item	Requisition #	PAID THRU CLAIMS
Agenda Item Name	0500 OUTSIDE COUNSEL CONTRACT AMENDMENT		

Agenda Wording

Contract amendment with outside counsel in action brought against the City seeking damages for wrongful termination, discrimination on the basis of disability, retaliation for civil litigation.

Summary (Background)

This case was filed on March 8, 2022. While much of the legal work done in the companion case was of benefit in this matter and did not have to be done twice, there are claims and allegations related to this wrongful termination case that need to be addressed. Legal is asking for a Contract Amendment adding another $50,000.00 to the contract, for a total of $100,000.00.

Lease? NO Grant related? NO Public Works? NO

Fiscal Impact		Budget Account
Expense	$ 50,000.00	# 0000.00000.00000.00000
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	PICCOLO, MIKE	Study Session\Other	PIES 09/26/2022
Division Director		Council Sponsor	CM Kinnear
Finance	BUSTOS, KIM	Distribution List	
Legal	PICCOLO, MIKE	taki.flevaris@pacificalawgroup.com	
For the Mayor	PERKINS, JOHNNIE	sfaggiano@spokanecity.org	
Additional Approvals		Thien.Tran@pacificalawgroup.com	
Purchasing		laga@spokanecity.org	
		james.scott@davies-group.com	
		skoegler@spokanecity.org	
		jlargent@spokanecity.org; shenry@spokanecity.org	

City Clerk's No. 2022-0297

CITY OF SPOKANE

CONTRACT AMENDMENT

Title: **OUTSIDE COUNSEL CONTRACT**

This Contract Amendment is made and entered into by and between the **CITY OF SPOKANE** as ("City"), a Washington municipal corporation, and **PACIFICA LAW GROUP,** whose address is 1191 Second Avenue, Suite 2000, Seattle, Washington 98101, as ("Firm"), individually hereafter referenced as a "party", and together as the "parties".

WHEREAS, the parties entered into a Contract wherein the firm agreed to act as OUTSIDE SPECIAL COUNSEL providing legal services and advice to the City regarding the matter of lawsuit of Lonnie Tofsrud v. City of Spokane, Spokane County Superior Court Cause No. 22-2-000714-32; and

WHEREAS, additional funds are necessary to defend this case, thus, the original Contract needs to be formally Amended by this written document; and

NOW, THEREFORE, in consideration of these terms, the parties mutually agree as follows:

1. CONTRACT DOCUMENTS.
The Contract, dated April 20, 2022 and April 21, 2022, any previous amendments, addendums and / or extensions / renewals thereto, are incorporated by reference into this document as though written in full and shall remain in full force and effect except as provided herein.

2. EFFECTIVE DATE.
This Contract Amendment shall become effective on September 1, 2022.

3. COMPENSATION.
The City shall pay an additional amount not to exceed **FIFTY THOUSAND AND NO/100 DOLLARS** (**$50,000.00**), for everything furnished and done under this Contract Amendment. The total amount under the original contract, all previous amendments and this Amendment is **ONE HUNDRED THOUSAND AND NO/100 DOLLARS ($100,000.00)**. This is the maximum amount to be paid under this Amendment and shall not be exceeded without the prior written authorization of the City, memorialized with the same formality as the original Contract and this document.

IN WITNESS WHEREOF, in consideration of the terms, conditions and covenants contained, or attached and incorporated and made a part, the parties have executed this Contract Amendment by having legally-binding representatives affix their signatures below.

PACIFICA LAW GROUP **CITY OF SPOKANE**

By_____
Signature Date

_____
Type or Print Name

_____
Title

Attest:

_____
City Clerk

By_____
Signature Date

_____
Type or Print Name

_____
Title

Approved as to form:

_____
Assistant City Attorney

M22-238

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	10/6/2022
		Clerk's File #	CPR 2022-0002
		Renews #	
Submitting Dept	ACCOUNTING	Cross Ref #	
Contact Name/Phone	DERREK DANIELS 625-6005	Project #	
Contact E-Mail	DDANIELS@SPOKANECITY.ORG	Bid #	
Agenda Item Type	Claim Item	Requisition #	
Agenda Item Name	5600-CLAIMS-2022		

Agenda Wording

Report of the Mayor of pending claims & payments of previously approved obligations through: 9/30/2022. Total:$4,446,000.10 with Parks & Library claims being approved by their respective boards. Claims excluding Parks & Library Total:$3,990,377.43

Summary (Background)

Pages 1-42 Check numbers: 589308 - 589450 ACH payment numbers: 107820 - 108078 On file for review in City Clerks Office: 42 Page listing of Claims Note:

Lease? NO Grant related? Public Works? NO

Fiscal Impact		Budget Account
Expense	$ 3,990,377.43	# Various
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	MURRAY, MICHELLE	Study Session\Other	
Division Director	WALLACE, TONYA	Council Sponsor	
Finance	MURRAY, MICHELLE	Distribution List	
Legal	PICCOLO, MIKE		
For the Mayor	ORMSBY, MICHAEL		
Additional Approvals			
Purchasing			

FUND	FUND NAME	AMOUNT
0100	GENERAL FUND	172,395.89
1100	STREET FUND	51,822.87
1200	CODE ENFORCEMENT FUND	3,136.54
1300	LIBRARY FUND	32,079.89
1360	MISCELLANEOUS GRANTS FUND	2,510.84
1380	TRAFFIC CALMING MEASURES	342.58
1400	PARKS AND RECREATION FUND	58,147.71
1425	AMERICAN RESCUE PLAN	109.00
1460	PARKING METER REVENUE FUND	7,641.44
1560	FORFEITURES & CONTRIBUTION FND	2,775.51
1625	PUBLIC SAFETY PERSONNEL FUND	135,000.00
1630	COMBINED COMMUNICATIONS CENTER	1,071.00
1640	COMMUNICATIONS BLDG M&O FUND	1,014.74
1910	CRIMINAL JUSTICE ASSISTANCE FD	2,378.55
1940	CHANNEL FIVE EQUIPMENT RESERVE	2,800.71
1950	PARK CUMULATIVE RESERVE FUND	81.17
1970	FIRE/EMS FUND	98,184.15
1990	TRANSPORTATION BENEFIT FUND	241,280.52
3200	ARTERIAL STREET FUND	170,814.18
3365	2018 UTGO LIBRARY CAPITAL BOND	1,399.09
4100	WATER DIVISION	839,555.07
4250	INTEGRATED CAPITAL MANAGEMENT	46,035.03
4300	SEWER FUND	238,455.00
4480	SOLID WASTE FUND	416,666.98
4600	GOLF FUND	8,223.49
4700	DEVELOPMENT SVCS CENTER	11,517.62
5100	FLEET SERVICES FUND	178,725.74
5200	PUBLIC WORKS AND UTILITIES	22,030.97
5300	IT FUND	46,411.26
5400	REPROGRAPHICS FUND	3,320.22
5500	PURCHASING & STORES FUND	200.65
5600	ACCOUNTING SERVICES	51.40
5700	MY SPOKANE	113.07
5750	OFFICE OF PERFORMANCE MGMT	86.59
5800	RISK MANAGEMENT FUND	7,547.80
5810	WORKERS' COMPENSATION FUND	397.00-
5830	EMPLOYEES BENEFITS FUND	795,324.57
5900	FACILITIES MANAGEMENT FUND OPS	19,576.37
5901	ASSET MANAGEMENT FUND CAPITAL	180.00-
5902	PROPERTY ACQUISITION POLICE	994.72
6060	EMPLOYEES' RETIREMENT FUND	119.13
6070	FIREFIGHTERS' PENSION FUND	103,431.38
6080	POLICE PENSION FUND	176,506.45
6920	CLAIMS CLEARING FUND	4,382.11
	TOTAL:	3,903,685.00

CHECK #	VENDOR	CITY	LIBRARY	PARKS
	USE TAX AMOUNTS	2,391.71	97.20	
00589308	CANON FINANCIAL SERVICES INC	927.80		
00589309	CENTURYLINK		76.30	
00589310	JEFF KISSLER		35.00	
00589311	NATE OLSON		100.00	
00589312	ALEX KWAMINA		200.00	
00589313	WASHINGTON TRUST BANK		237.19	
00589314	ADVANCE AUTO PARTS	369.05		
00589315	JEREMIAH J BINSCHUS	373.00		
00589316	LOGAN CALLEN	2,524.00		
00589317	GAIL L CROPPER	163.39		
00589318	WILLIAM J GONZALEZ	1,236.42		
00589319	EPIC ELECTRICAL ENTERPRISES	50.00		
00589320	PATRIOT ELECTRIC/LIGHTING CO	15.00		
00589321	PANAGOS CONSTRUCTION	650.00		
00589322	OK ELECTRIC	40.00		
00589323	ANDY JOHNSTON	6,072.00		
00589324	DYNASTY ROOFING LLC	196.50		
00589325	MARK CORDES	248.50		
00589326	JENNIE LINDQUIST	550.00		
00589327	MARY M WINKES	850.00		
00589328	CAROL TOMSIC	163.39		
00589329	DONNA FAGAN	563.39		
00589330	PERFORMANCE RADIATOR PACIFIC	1,815.94		
00589331	NATIONSERVE	2,103.70		
00589332	SAFETY KLEEN CORPORATION			227.59
00589333	FRANCIS ADEWALE	1,838.73		
00589334	POLLYANNE F BIRGE	376.13		
00589335	BROOKDALE SENIOR LIVING	520.94		
00589336	BROOKDALE SENIOR LIVING	1,135.00		
00589337	BROOKDALE SENIOR LIVING	7,270.00		
00589338	CASCADE ENGINEERING INC	54,105.13		
00589339	CENTURYLINK	174.28		
00589340	CRISTA SENIOR COMMUNITY	7,775.00		
00589341	GERARD T DEATHERAGE	425.00		
00589342	MADRONA PEAK LLC	4,525.50		
00589343	GERAS LLC	3,536.00		
00589344	ROGER GLANVILLE	1,532.99		
00589345	RC SCHWARTZ & ASSOCIATES INC	139.47		
00589346	BC ADVENTURE	834.94		
00589347	ROBERT MCLEES	239.50		
00589348	COLIN NAAKE	884.81		
00589349	NORTH SPOKANE IRRIGATION	78.77		
00589350	GALEN PETERSON	913.00		
00589351	JAMES F POWELL	320.00		
00589352	ROBERT PRATT	125.34		
00589353	TONYA M REISS	207.50		
00589354	UNITED METHODIST HOMES	6,955.00		
00589355	ROSAUER'S PHARMACY	1,180.19		
00589356	SPOKANE FIRE DEPARTMENT	26.08		
00589357	SPOKANE LIFELINE INC	27.23		
00589358	SULLIVAN VENTURES, LLC	6,125.00		
00589359	WILLIAM J THOMAS	471.18		

CHECK #	VENDOR	CITY	LIBRARY	PARKS
00589360	T-MOBILE	658.00		
00589361	LLOYD C WOLESLAGLE JR	329.36		
00589362	DANIEL WORDELL	551.25		
00589363	AT&T			117.25
00589364	CENTURYLINK			107.97
00589365	COMCAST			72.98
00589366	COMCAST			85.00
00589367	KEVIN SHARRAI			96.75
00589368	SWIRE PACIFIC HOLDINGS, INC			611.56
00589369	WALTER E NELSON CO			650.53
00589416	AUDUBON VETERINARY CLINIC	985.57		
00589417	COLEMAN WORLDWIDE	15,218.29		
00589418	DGT ENTERPRISES LLC	17,260.00		
00589419	INDUSTRIAL WELDING CO INC	574.98		
00589420	JIT TRUCK PARTS LLC	2,296.50		
00589422	ALVAREZ ENVIRONMENTAL LLC	139.00		
00589423	JHAB3 CO	1,674.43		
00589424	LIUDMILA KUZNETSOV	17.75		
00589425	ORKIN	113.36		
00589426	SPOKANE COUNTY BAR ASSN	1,560.00		
00589427	SPOKANE CONCRETE CUTTING INC	1,941.56		
00589428	WCP SOLUTIONS	1,247.57		
00589429	WHITWORTH WATER DISTRICT NO	113.02		
00589430	ABADAN REPROGRAPHICS	451.34		
00589431	ADVANCE AUTO PARTS	355.37		
00589432	ADVANCED FIRE SYSTEMS INC	363.00		
00589433	CENTURYLINK	701.47		
00589434	CRANETECH INC	1,000.00		
00589435	DIRECT AUTOMOTIVE DISTRIBUTI	1,654.82		
00589436	ESTATE OF KATHRYN LEWIS	4,382.11		
00589437	MICHELLE JENNER	30.00		
00589438	VALLEY EMPIRE COLLECTIONS	55.40		
00589439	HOUSE OF HEALING PLLC	150.00		
00589440	NOVELOZO GENERAL CONTRACTORS	500.00		
00589441	T-MOBILE	96.41		
00589442	T-MOBILE	90.74		
00589443	US BANK	18,280.24		
00589444	US POSTAL SERVICE	275.00		
00589445	RICHARD WALLIS	672.11		
00589446	WHITE BLOCK COMPANY INC	6,921.50		
00589447	CENTURYLINK			169.48
00589448	COMCAST			205.07
00589449	FLANAGAN VENTURES LLC			7,824.00
00589450	HANNAH KIEHN			78.75
80107820	ABM JANITORIAL SERVICES SOUT	1,329.77		
80107821	AHBL INC		600.00	
80107822	AUNT FLOW CORP		1,080.00	
80107823	AVISTA UTILITIES		3,970.35	
80107824	DESIGNER DECAL INC		598.87	
80107825	ENVIRONMENTAL RESOURCE	711.23		
80107826	FLUME INC	5,232.00		
80107827	GENERAL INDUSTRIES INC	9,603.49		
80107828	HELVETICKA INC		1,278.82	

CHECK #	VENDOR	CITY	LIBRARY	PARKS
80107829	HUMANIX HUMAN RESOURCE		1,786.00	

80107830	CPM DEVELOPMENT CORP DBA	276,039.97			
80107831	MIMIRS WELL LLC	10,082.29			
80107832	WORKSPACE DEVELOPMENT LLC		14,649.53		
80107833	OVERDRIVE INC		10,015.51		
80107834	PERKINS COIE LLP		488.25		
80107835	ROGUE HEART MEDIA INC	34,126.42			
80107836	SAVEMORE BUILDING SUPPLY/DIV		278.78		
80107837	SHAMROCK PAVING CO/DIV OF	132,016.68			
80107838	TECHNICAL FURNITURE SYSTEMS		6,742.31		
80107839	VERIZON WIRELESS		202.68		
80107840	VERTIV CORPORATION	11,459.17			
80107841	WCP SOLUTIONS		1,344.69		
80107842	PETER ANDERSON		28.13		
80107843	DANA R DALRYMPLE		15.06		
80107844	TONY LAMAR NEWTON		1,760.00		
80107845	SUMITTRA A SHADDUCK		13.25		
80107846	ACRANET CBS BRANCH/DIV OF	272.00			
80107847	ALEX BARROUK CONSULTING &	600.00			
80107848	ALLIED ENVELOPE	183.33			
80107849	ALSCO DIVISION OF ALSCO INC				439.64
80107850	NORTHWEST INDUSTRIAL SERVICE				880.00
80107851	BACON CONCRETE INC				533.00
80107852	BAKER & TAYLOR BOOKS		8,045.24		
80107853	BATTERY SYSTEMS INC	1,232.43			
80107854	CENGAGE LEARNING INC		410.22		
80107855	COFFMAN ENGINEERS INC				11,700.00
80107856	COMCAST	4,708.18			
80107857	COPIERS NORTHWEST INC	89.96			
80107858	CORBIN SENIOR ACTIVITY CENTE				2,612.50
80107859	CORE & MAIN LP	268.80			
80107860	CUMMINS NORTHWEST LLC	43,526.62			
80107861	GWP HOLDINGS LLC	3,424.92			
80107862	ELJAY OIL CO INC	208.63			
80107863	ERGON ASPHALT & EMULSIONS IN	12,077.20			
80107864	EUROFINS ENVIRONMENT TESTING	412.00			
80107865	EVERGREEN STATE TOWING LLC	165.68			
80107866	SHELLEY FAIRWEATHER-VEGA		126.44		
80107867	GORLEY LOGISTICS LLC				50.74
80107868	HELFRICH BROTHERS BOILER WOR	5,336.42			
80107869	INLAND ENVIRONMENTAL RESOURC	8,179.79			
80107870	HOME DEPOT USA INC	582.62			
80107871	KEMIRA WATER SOLUTIONS INC	59,349.70			
80107872	KENWORTH SALES COMPANY	1,140.20			
80107873	LAND EXPRESSIONS LLC				2,150.00
80107874	LOOMIS ARMORED US INC	852.22			
80107875	MID CITY CONCERNS INC				1,543.75
80107876	MOTION AUTO SUPPLY	705.03			
80107877	NALCO CO	3,241.57			
80107878	NAPA AUTO PARTS	1,557.08			
80107879	NORLIFT INC	2,589.56			
80107880	LAKEYLAND INC DBA	199.08			
80107881	PAPE MACHINERY INC	7,749.65			

CHECK #	VENDOR	CITY	LIBRARY	PARKS
80107882	PASSPORT LABS INC	5,809.59		
80107883	RABBLE LLC		22,000.00	
80107884	SINTO SENIOR CENTER			6,434.17
80107885	SOLID WASTE SYSTEMS INC	4,746.38		
80107886	SOUTHGATE NEIGHBORHOOD COUNC	163.39		

80107887	SOUTHWEST SPOKANE COMMUNITY				3,328.92
80107888	SPOKANE COUNTY TITLE CO	327.00			12,703.75
80107889	SPRAGUE PEST CONTROL/DIV OF				58.95
80107890	STARPLEX CORP				356.25
80107891	STERICYCLE INC	1,279.34			
80107892	TITAN TRUCK EQUIPMENT	1,058.50			
80107893	TRANSPORT EQUIPMENT INC	739.45			
80107894	US BANK TRUST NA	50,000.00			
80107895	US BANK OR CITY TREASURER	7,388.70			
80107896	VERIZON WIRELESS	86.59			
80107897	WENDLE FORD NISSAN ISUZU	998.71			
80107898	WEST CENTRAL COMMUNITY				6,056.25
80107899	WESTSIDE MOTORSPORTS	2,821.53			
80107900	WHITE CAP LP	1,090.00			
80107901	SHAMROCK AUTOMOTIVE	549.09			
80107902	BRENDAN CRAIG	1,286.88			
80107903	JOEL DAVID JOHNSTON	650.00			
80107904	JAMIE J MCINTYRE	304.86			
80107905	ACTION MATERIALS	1,896.26			
80107906	ADVANCED UNDERGROUND UTILITY				750.00
80107907	VYANET OPERATIONS GROUP dba	165.70			
80107908	ALSCO DIVISION OF ALSCO INC	3,527.22			
80107909	NORTHWEST INDUSTRIAL SERVICE	330.00			
80107910	AVISTA UTILITIES	15,343.91			
80107911	ALEXANDER GOOD DEPOT LLC	13,769.00			
80107912	CAMTEK INC	395.67			
80107913	CINTAS CORPORATION NO 3	16,787.85			
80107914	COLEMAN OIL COMPANY LLC	13,886.15			1,968.39
80107915	COMPUNET INC				2,412.23
80107916	DELL MARKETING LP				59,910.79
80107917	DEVRIES INFORMATION MANAGEME	8.55			
80107918	EASTSIDE ELECTRIC MOTORS	30,509.10			
80107919	ELJAY OIL CO INC	2,078.25			
80107920	EVCO SOUND & ELECTRONICS				430.99
80107921	EVERGREEN STATE TOWING LLC	341.72			
80107922	FASTENAL CO	635.92			
80107923	GORLEY LOGISTICS LLC	79.74			
80107924	FIREPOWER INC				1,051.30
80107925	FREIGHT WAY INC				600.00
80107926	FROSTY ICE/DIV OF R PLUM COR	117.72			
80107927	BRIDGESTONE AMERICAS INC	1,205.80			
80107928	HUGHES FIRE EQUIPMENT INC	2,748.69			
80107929	THE KENERSON GROUP/DIV OF				1,500.00
80107930	LEADERSHIP SPOKANE	3,400.00			
80107931	LINN MACHINE & MFG	4,157.36			
80107932	MR CAR WASH	208.00			
80107933	NAPA AUTO PARTS	975.15			
80107934	NATIONAL COLOR GRAPHICS INC				227.81

CHECK #	VENDOR	CITY	LIBRARY	PARKS
80107935	CHARLES H NEU			344.28
80107936	NORTH RIDGE HOUSE INC	19,470.00		
80107937	PACIFIC NW EMERGENCY EQUIPME	329.18		
80107938	PERFORMANCE SYSTEMS	11.94		
80107939	POINTE PEST CONTROL	245.25		
80107940	PREMERA BLUE CROSS OR	648,026.42		
80107941	SHI CORP			43.27
80107942	SITEONE LANDSCAPE SUPPLY LLC	223.57		
80107943	SMITH WESTERN CO			1,956.99

80107944	SPOKANE COPS	135,000.00			
80107945	SPOKANE COUNTY TREASURER	160,825.83			
80107946	SPOKANE INT'L TRANSLATION/DI				175.40
80107947	SPOKANE POWER TOOL & HDWE	833.79			
80107948	COWLES PUBLISHING COMPANY	297.17			
80107949	AARON THEISEN				1,725.00
80107950	VERIZON WIRELESS	4,431.02			
80107951	WCP SOLUTIONS				252.66
80107952	WESTERN EQUIPMENT DISTRIBUTO				5,634.99
80107953	WESTERN STATES EQUIPMENT CO				3,269.67
80107954	WILBUR ELLIS COMPANY				4,510.10
80107955	WILDROSE LTD dba				1,246.52
80107956	KACIE DIETZ	159.71			182.50
80107957	GREGORY C HARSHMAN	318.40			
80107958	KEVIN HAUGHTON	753.13			
80107959	INGA M NOTE	309.90			
80107960	LUVIMAE P OMANA	2,447.73			
80107961	FRANCISCA RAPIER	352.13			
80107962	RENEE K ROBERTSON	541.50			
80107963	ANGELA TAGNANI	126.00			
80107964	FRED UTTKE	126.28			
80107966	CARISSA WARE	159.71			
80107967	ACRANET CBS BRANCH/DIV OF	786.00			
80107968	INLAND NW AGC APPRENTICESHIP	25,000.00			
80107969	UNIVERSAL PROTECTION SERVICE	81.84			
80107970	ARAMARK UNIFORM SERVICES	57.82			
80107971	ARROW CONSTRUCTION SUPPLY IN	7.95			
80107972	AVISTA UTILITIES	27,597.24			
80107973	BARR-TECH LLC	97,886.97			
80107974	BUDINGER & ASSOCIATES INC	299.84			
80107975	C & C YARD CARE	1,049.13			
80107976	CALL2RECYCLE INC	1,311.99			
80107977	COMMONSTREET CONSULTING LLC	8,058.00			
80107978	CONTRACT DESIGN ASSOCIATES I	985.17			
80107979	COPIERS NORTHWEST INC	3,117.09			
80107980	DESIMONE CONSULTING LLC	6,667.00			
80107981	DLT SOLUTIONS LLC	12,388.79			
80107982	EASTERN WASHINGTON UNIVERSIT	2,666.00			
80107983	FEDERAL EXPRESS CORP/DBA FED	5.22			
80107984	FIREPOWER INC	70.85			
80107985	BRIDGESTONE AMERICAS INC	1,232.20			
80107986	GORDON TRUCK CENTERS INC DBA	204.43			
80107987	GRAINGER INC	269.11			
80107988	H2E INC	1,003.97			

CHECK #	VENDOR	CITY	LIBRARY	PARKS
80107989	HYDRAULICS PLUS INC	4,812.70		
80107990	INLAND ELEVATOR LLC	235.44		
80107991	INLAND PACIFIC HOSE & FITTIN	62.26		
80107992	INLAND POWER & LIGHT CO	114.40		
80107993	INTELLECTYX INC	29,566.67		
80107994	K & L GATES LLP	2,498.40		
80107995	KENWORTH SALES COMPANY	2,750.40		
80107996	KEY CODE MEDIA INC	132.44		
80107997	MCKINSTRY CO LLC	431.79		
80107998	MOTION AUTO SUPPLY	1,025.15		
80107999	NALCO CO	3,428.85		
80108000	NAPA AUTO PARTS	2,535.85		
80108001	OIL RE-REFINING CO INC	859.50		

80108002	ONLINE CLEANING SERVICES	9,068.80		
80108003	PITNEY BOWES GLOBAL FINANCIA	952.36		
80108004	POWER CITY ELECTRIC INC	11,050.00		
80108005	SHI CORP	901.25		
80108006	SPOKANE NEIGHBORHOOD ACTION	13,609.13		
80108007	SPOKANE COUNTY TREASURER	302,440.23		
80108008	SPOKANE HOUSING AUTHORITY	2,788.47		
80108009	SPOKANE TRANSIT AUTHORITY	3,221.13		
80108010	STELLAR INDUSTRIAL SUPPLY IN	1,358.89		
80108011	SYSTEMS AND SOFTWARE INC	12,750.00		
80108012	US BANK P CARD PAYMENTS	147,908.59		
80108013	US POSTMASTER	500.00		
80108014	VERIZON WIRELESS	2,361.54		
80108015	VOLUNTEERS OF AMERICA OF	30,589.68		
80108016	ACTION MATERIALS	3,983.77		
80108017	ADVANCED TRAFFIC PRODUCTS IN	423.40		
80108018	AGATHOS LABORATORIES INC	7,380.65		
80108019	AM HARDWARE CO	534.10		
80108020	NORTHWEST INDUSTRIAL SERVICE	110.00		4,295.00
80108021	AVISTA UTILITIES	503,560.45		75,046.09
80108022	BARR-TECH LLC			158.80
80108023	BATTERY SYSTEMS INC	1,399.09		
80108024	BECKER BUICK-GMC INC	580.32		
80108025	BLACK DIAMOND ASPHALT PAVING			28,212.94
80108026	BUCK'S TIRE & AUTOMOTIVE	109.00		
80108027	CDA REDI MIX & PRECAST INC	8,355.94		
80108028	CINTAS CORPORATION NO 3	1,943.11		
80108029	CLARK'S CONTAINERS LLC	174.40		
80108030	COLEMAN OIL COMPANY LLC	40,843.40		
80108031	COLUMBIA ELECTRIC SUPPLY/DIV	3,483.88		
80108032	STEVE CONNER			17,264.83
80108033	CONSOLIDATED SUPPLY CO	193,722.12		
80108034	CONTRACT DESIGN ASSOCIATES I	827.33		844.33
80108035	COPIERS NORTHWEST INC	646.95		
80108036	CORWIN OF SPOKANE LLC	111.85		
80108037	CREEK AT QUALCHAN GOLF COURS			13,487.51
80108038	CUMMINS NORTHWEST LLC	6,033.80		
80108039	DELTA DENTAL OF WASHINGTON	58,117.73		
80108040	GWP HOLDINGS LLC	6,148.68		
80108041	HARWIN LLC	768.45		

CHECK #	VENDOR	CITY	LIBRARY	PARKS
80108042	ELJAY OIL CO INC	1,636.96		
80108043	EVERGREEN STATE TOWING LLC	1,209.90		
80108044	FASTENAL CO	1,788.84		
80108045	ENCORE VENTURES LLC			545.00
80108046	GORLEY LOGISTICS LLC	43.49		
80108047	BRIDGESTONE AMERICAS INC	2,510.57		
80108048	HUGHES FIRE EQUIPMENT INC	123.11		
80108049	INLAND PACIFIC HOSE & FITTIN	69.08		
80108050	INLAND POWER & LIGHT CO	701.94		
80108051	JRM ENTERPRISES INC	140.00		
80108052	KAISER FOUNDATION HEALTH PLA	187,771.39		
80108053	MICHAEL TERRELL LANDSCAPE			3,401.87
80108054	NORCO INC	88.83		
80108055	OXARC INC	5,752.88		
80108056	JEREMY OYEN			1,000.00
80108057	PARAMETRIX INC	30,412.50		
80108058	PREMERA BLUE CROSS	68,690.44		

80108059	PRO MECHANICAL SERVICES INC	19,549.16		
80108060	ROSE CITY LABEL	627.50		
80108061	SANDBAGGERS CLUB LLC			14,947.10
80108062	SITEONE LANDSCAPE SUPPLY LLC	1,142.31		
80108063	SOIL TECHNOLOGIES CORP			664.40
80108064	SPOKANE COUNTY TREASURER	200.00		
80108065	STANLEY CONVERGENT SECURITY			2,709.27
80108066	STELLAR INDUSTRIAL SUPPLY IN	869.46		
80108067	T & T GOLF MANAGEMENT INC			19,004.42
80108068	TRANSITIONS DBA TRANSITIONAL	17,012.85		
80108069	UNIVERSITY OF CINCINNATI	6,000.00		
80108070	VERIZON WIRELESS	2,416.71		
80108071	WA STATE DEPT OF ECOLOGY	1,280.00		
80108072	WASHINGTON EQUIPMENT	2,183.29		
80108073	WCP SOLUTIONS	1,224.89		
80108074	WESTERN EQUIPMENT DISTRIBUTO			50,573.55
80108075	WSF LLC	7,680.29		
80108076	WILLIAMS TOWING & RECOVERY L	1,246.69		
80108077	WYATT BARNETT	136.00		
80108078	NIKKI HANSHAW	92.63		
		3,990,377.43	76,179.82	379,442.85
			CITYWIDE TOTAL:	4,446,000.10

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

0020 - NONDEPARTMENTAL

EASTERN WASHINGTON UNIVERSITY STUDENT FINANCIAL SERVICES	CONTRACTUAL SERVICES ACH PMT NO. - 80107982	2,666.00
HOUSE OF HEALING PLLC DR. PAMIL SIDHU	OTHR BUS REGISTRATIONS/PERMITS CHECK NO. - 00589439	150.00
SPOKANE COUNTY TREASURER	CONTRACTUAL SERVICES ACH PMT NO. - 80108007	59,273.46
SPOKANE COUNTY TREASURER	SPOKANE COUNTY ACH PMT NO. - 80108007	242,296.86
SPOKANE TRANSIT AUTHORITY	CONTRACTUAL SERVICES ACH PMT NO. - 80108009	3,221.13
US BANK TREASURY MANAGEMENT SERVICES	EARNINGS CREDIT CHECK NO. - 00589443	1,680.27-
TOTAL FOR 0020 - NONDEPARTMENTAL		305,927.18

0030 - POLICE OMBUDSMAN

LUVIMAE P OMANA	AIRFARE ACH PMT NO. - 80107960	817.88
LUVIMAE P OMANA	LODGING ACH PMT NO. - 80107960	1,117.50
LUVIMAE P OMANA	OTHER TRANSPORTATION EXPENSES ACH PMT NO. - 80107960	387.85
LUVIMAE P OMANA	PER DIEM ACH PMT NO. - 80107960	124.50
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	500.00
US BANK P CARD PAYMENTS	PARKING/TOLLS (LOCAL) ACH PMT NO. - 80108012	200.00
US BANK P CARD PAYMENTS	PUBLICATIONS ACH PMT NO. - 80108012	31.80
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	34.50
TOTAL FOR 0030 - POLICE OMBUDSMAN		3,214.03

0100 - GENERAL FUND

US BANK P CARD PAYMENTS	PCARD ADVANCE PYMT REC ACH PMT NO. - 80108012	243,081.02-

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

TOTAL FOR 0100 - GENERAL FUND	243,081.02-

0230 - CIVIL SERVICE

US BANK P CARD PAYMENTS	NON-TRAVEL MEALS/LGHT RFRSHMT ACH PMT NO. - 80108012	83.56
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	114.02
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	239.00
TOTAL FOR 0230 - CIVIL SERVICE		436.58

0260 - CITY CLERK

US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	331.00
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	180.00
TOTAL FOR 0260 - CITY CLERK		511.00

0300 - HUMAN SERVICES

ACRANET CBS BRANCH/DIV OF CBS REPORTING INC	OTHER MISC CHARGES ACH PMT NO. - 80107967	100.00
US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	48.92
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	523.10
TOTAL FOR 0300 - HUMAN SERVICES		672.02

0320 - COUNCIL

DESIMONE CONSULTING LLC	PROFESSIONAL SERVICES ACH PMT NO. - 80107980	6,667.00
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	124.78
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	50.05
US BANK P CARD PAYMENTS	OTHER MISC CHARGES ACH PMT NO. - 80108012	185.00

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	40.00
WA STATE DEPT OF REVENUE	OTH DUES/SUBSCRIPTNS/MEMBERSHP -	1.17
WA STATE DEPT OF REVENUE	OTHER MISC CHARGES	

	-	16.65
WA STATE DEPT OF REVENUE	REGISTRATION/SCHOOLING	
	-	3.60
	TOTAL FOR 0320 - COUNCIL	7,088.25

0330 - PUBLIC AFFAIRS/COMMUNICATIONS

US BANK P CARD PAYMENTS	CONTRACTUAL SERVICES	
	ACH PMT NO. - 80108012	3,353.54
US BANK P CARD PAYMENTS	MINOR EQUIPMENT	
	ACH PMT NO. - 80108012	239.78
US BANK P CARD PAYMENTS	OPERATING SUPPLIES	
	ACH PMT NO. - 80108012	52.19
US BANK P CARD PAYMENTS	SOFTWARE (NONCAPITALIZED)	
	ACH PMT NO. - 80108012	870.92
	TOTAL FOR 0330 - PUBLIC AFFAIRS/COMMUNICATIONS	4,516.43

0370 - ENGINEERING SERVICES

ARAMARK UNIFORM SERVICES	LAUNDRY/JANITORIAL SERVICES	
AUS WEST LOCKBOX	ACH PMT NO. - 80107970	18.41
AVISTA UTILITIES	UTILITY LIGHT/POWER SERVICE	
	ACH PMT NO. - 80108021	1,031.13
COPIERS NORTHWEST INC	OPERATING RENTALS/LEASES	
	ACH PMT NO. - 80108035	443.11
DGT ENTERPRISES LLC	MEDICAL SERVICES	
DBA SPOKANE TESTING SOLUTIONS	CHECK NO. - 00589418	50.00
SPOKANE POWER TOOL & HDWE	POWER TOOLS/EQUIPMENT	
	ACH PMT NO. - 80107947	833.79
T-MOBILE	CELL PHONE	
	CHECK NO. - 00589441	12.92
T-MOBILE	IT/DATA SERVICES	
	CHECK NO. - 00589441	83.49
US BANK P CARD PAYMENTS	EQUIPMENT REPAIRS/MAINTENANCE	
	ACH PMT NO. - 80108012	152.61

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	MINOR EQUIPMENT	
	ACH PMT NO. - 80108012	841.90
US BANK P CARD PAYMENTS	OFFICE SUPPLIES	
	ACH PMT NO. - 80108012	408.34
US BANK P CARD PAYMENTS	OPERATING SUPPLIES	
	ACH PMT NO. - 80108012	490.05
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP	
	ACH PMT NO. - 80108012	89.95

US BANK P CARD PAYMENTS	POSTAGE ACH PMT NO. - 80108012	1.68
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	480.00
VERIZON WIRELESS	CELL PHONE ACH PMT NO. - 80108070	1,491.05
VERIZON WIRELESS	IT/DATA SERVICES ACH PMT NO. - 80108070	840.38
WA STATE DEPT OF REVENUE	MINOR EQUIPMENT -	22.04
	TOTAL FOR 0370 - ENGINEERING SERVICES	7,290.85

0410 - FINANCE

ACRANET CBS BRANCH/DIV OF CBS REPORTING INC	BACKGROUND CHECKS ACH PMT NO. - 80107967	50.00
COMCAST	MOBILE BROADBAND ACH PMT NO. - 80107856	174.70
RENEE K ROBERTSON	OTHER TRANSPORTATION EXPENSES ACH PMT NO. - 80107962	365.00
RENEE K ROBERTSON	PER DIEM ACH PMT NO. - 80107962	176.50
US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	4,484.28
US BANK TREASURY MANAGEMENT SERVICES	EARNINGS CREDIT CHECK NO. - 00589443	2,467.90-
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	223.66
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	36.09
	TOTAL FOR 0410 - FINANCE	3,042.33

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

0450 - NEIGHBHD HOUSING HUMAN SVCS

COLEMAN WORLDWIDE MOVING LLC	EXTERNAL MOVING EXPENSES CHECK NO. - 00589417	15,218.29
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	80.31
	TOTAL FOR 0450 - NEIGHBHD HOUSING HUMAN SVCS	15,298.60

0500 - LEGAL

ABM JANITORIAL SERVICES SOUTH	LAUNDRY/JANITORIAL SERVICES	

SOUTH CENTRAL INC dba	ACH PMT NO. - 80107820	1,329.77
CONTRACT DESIGN ASSOCIATES INC	OFFICE FURNITURE (NON CAPITAL) ACH PMT NO. - 80108034	1,812.50
LIUDMILA KUZNETSOV 1721 W SIENNA LN	WITNESS FEES CHECK NO. - 00589424	17.75
SPOKANE COUNTY BAR ASSN SPOKANE COUNTY COURTHOUSE	OTH DUES/SUBSCRIPTNS/MEMBERSHP CHECK NO. - 00589426	1,560.00
US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	22.31
US BANK TREASURY MANAGEMENT SERVICES	EARNINGS CREDIT CHECK NO. - 00589443	0.16-
US BANK P CARD PAYMENTS	CLE TRAVEL ACH PMT NO. - 80108012	545.00
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	61.53
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	731.55
US BANK P CARD PAYMENTS	SOFTWARE (NONCAPITALIZED) ACH PMT NO. - 80108012	60.00
TOTAL FOR 0500 - LEGAL		6,140.25

0520 - MAYOR

US BANK P CARD PAYMENTS	NON-TRAVEL MEALS/LGHT RFRSHMT ACH PMT NO. - 80108012	204.27
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	44.41
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	348.40

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	OTHER MISC CHARGES ACH PMT NO. - 80108012	88.82
TOTAL FOR 0520 - MAYOR		685.90

0550 - NEIGHBORHOOD SERVICES

ALEX BARROUK CONSULTING & DEVELOPMENT DBA AIM & BUILD	CONTRACTUAL SERVICES ACH PMT NO. - 80107847	600.00
CAROL TOMSIC 3303 E 27TH	OTH DUES/SUBSCRIPTNS/MEMBERSHP CHECK NO. - 00589328	163.39
DONNA FAGAN 1523 E DALTON	OTH DUES/SUBSCRIPTNS/MEMBERSHP CHECK NO. - 00589329	163.39
DONNA FAGAN	PROFESSIONAL SERVICES	

1523 E DALTON	CHECK NO. - 00589329	400.00
GAIL L CROPPER	OTH DUES/SUBSCRIPTNS/MEMBERSHP CHECK NO. - 00589317	163.39
JENNIE LINDQUIST	PROFESSIONAL SERVICES CHECK NO. - 00589326	550.00
JOEL DAVID JOHNSTON DBA SPARE PARTS	PROFESSIONAL SERVICES ACH PMT NO. - 80107903	650.00
MARY M WINKES 119 E 17TH AVE	OTH DUES/SUBSCRIPTNS/MEMBERSHP CHECK NO. - 00589327	163.39
MARY M WINKES 119 E 17TH AVE	PROFESSIONAL SERVICES CHECK NO. - 00589327	686.61
SOUTHGATE NEIGHBORHOOD COUNCIL	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80107886	163.39
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	13.77
US BANK P CARD PAYMENTS	PRINTING/BINDING/REPRO ACH PMT NO. - 80108012	109.60
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	380.00
WA STATE DEPT OF REVENUE	PRINTING/BINDING/REPRO -	9.87
TOTAL FOR 0550 - NEIGHBORHOOD SERVICES		4,216.80

0560 - MUNICIPAL COURT

MICHELLE JENNER 7610 N LINDEKE ST	CASH OVER/SHORT CHECK NO. - 00589437	30.00

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

PITNEY BOWES GLOBAL FINANCIAL SERVICES LLC	OPERATING RENTALS/LEASES ACH PMT NO. - 80108003	952.36
SPOKANE COUNTY TREASURER	SPOKANE COUNTY ACH PMT NO. - 80108007	869.91
UNIVERSAL PROTECTION SERVICE DBA ALLIED UNIVERSAL SECURITY	ALARM/SECURITY SERVICES ACH PMT NO. - 80107969	81.84
US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	144.29
US BANK P CARD PAYMENTS	CELL PHONE ACH PMT NO. - 80108012	198.30
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	1,173.53
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	1,323.92
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	495.00

US BANK P CARD PAYMENTS	SOFTWARE (NONCAPITALIZED) ACH PMT NO. - 80108012	32.00
VALLEY EMPIRE COLLECTIONS PO BOX 141248	CASH OVER/SHORT CHECK NO. - 00589438	55.40
TOTAL FOR 0560 - MUNICIPAL COURT		5,356.55

0620 - HUMAN RESOURCES

ACRANET CBS BRANCH/DIV OF CBS REPORTING INC	BACKGROUND CHECKS ACH PMT NO. - 80107967	68.50
DGT ENTERPRISES LLC DBA SPOKANE TESTING SOLUTIONS	MEDICAL SERVICES CHECK NO. - 00589418	500.00
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	36.15
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	86.27
TOTAL FOR 0620 - HUMAN RESOURCES		690.92

0650 - PLANNING SERVICES

COWLES PUBLISHING COMPANY DBA THE SPOKESMAN-REVIEW	ADVERTISING ACH PMT NO. - 80107948	297.17
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	49.00

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	160.75
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	931.33
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	1,253.54
TOTAL FOR 0650 - PLANNING SERVICES		2,691.79

0680 - POLICE

ACRANET CBS BRANCH/DIV OF CBS REPORTING INC	BACKGROUND CHECKS ACH PMT NO. - 80107967	324.50
ALEXANDER GOOD DEPOT LLC C/O BLACK REALTY MGMT	OPERATING RENTALS/LEASES ACH PMT NO. - 80107911	13,769.00
AUDUBON VETERINARY CLINIC	VETERINARY SERVICES CHECK NO. - 00589416	985.57
COMCAST	IT/DATA SERVICES ACH PMT NO. - 80107856	2,915.45

LEADERSHIP SPOKANE	REGISTRATION/SCHOOLING ACH PMT NO. - 80107930	3,400.00
US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	145.52
US BANK TREASURY MANAGEMENT SERVICES	EARNINGS CREDIT CHECK NO. - 00589443	14.44-
US BANK P CARD PAYMENTS	BACKGROUND CHECKS ACH PMT NO. - 80108012	383.47
US BANK P CARD PAYMENTS	CLOTHING ACH PMT NO. - 80108012	250.70
US BANK P CARD PAYMENTS	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	682.59
US BANK P CARD PAYMENTS	IT/DATA SERVICES ACH PMT NO. - 80108012	158.65
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	1,857.51
US BANK P CARD PAYMENTS	OFFICE FURNITURE (NON CAPITAL) ACH PMT NO. - 80108012	0.00
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	778.30
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	7,972.49

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	155.34
US BANK P CARD PAYMENTS	POSTAGE ACH PMT NO. - 80108012	619.20
US BANK P CARD PAYMENTS	PROMOTIONAL SUPPLIES ACH PMT NO. - 80108012	3,026.83
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	1,165.00
US BANK P CARD PAYMENTS	SOFTWARE MAINTENANCE ACH PMT NO. - 80108012	107.91
US BANK P CARD PAYMENTS	VETERINARY SERVICES ACH PMT NO. - 80108012	163.48
WILLIAMS TOWING & RECOVERY LLC	TOWING EXPENSE ACH PMT NO. - 80108076	1,246.69
TOTAL FOR 0680 - POLICE		40,093.76

0690 - COMMUNITY JUSTICE SERVICES

COPIERS NORTHWEST INC	OPERATING RENTALS/LEASES ACH PMT NO. - 80107979	256.81
UNIVERSITY OF CINCINNATI	REGISTRATION/SCHOOLING	

RESEARCH INSTITUTE	ACH PMT NO. - 80108069	6,000.00
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	365.34
US BANK P CARD PAYMENTS	SOFTWARE (NONCAPITALIZED) ACH PMT NO. - 80108012	60.00
TOTAL FOR 0690 - COMMUNITY JUSTICE SERVICES		6,682.15

0700 - PUBLIC DEFENDER

US BANK P CARD PAYMENTS	MISC SERVICES/CHARGES ACH PMT NO. - 80108012	30.00
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	891.52
TOTAL FOR 0700 - PUBLIC DEFENDER		921.52

1100 - STREET FUND

ADVANCED TRAFFIC PRODUCTS INC	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108017	423.40

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

ARROW CONSTRUCTION SUPPLY INC	OPERATING SUPPLIES ACH PMT NO. - 80107971	7.95
AVISTA UTILITIES	UTILITY LIGHT/POWER SERVICE ACH PMT NO. - 80107972	27,455.96
AVISTA UTILITIES	UTILITY NATURAL GAS ACH PMT NO. - 80107972	141.28
DGT ENTERPRISES LLC DBA SPOKANE TESTING SOLUTIONS	MEDICAL SERVICES CHECK NO. - 00589418	530.00
ERGON ASPHALT & EMULSIONS INC	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80107863	12,077.20
INLAND POWER & LIGHT CO	UTILITY LIGHT/POWER SERVICE ACH PMT NO. - 80107992	114.40
JEREMIAH J BINSCHUS	PERMITS/OTHER FEES CHECK NO. - 00589315	373.00
STELLAR INDUSTRIAL SUPPLY INC	CLOTHING ACH PMT NO. - 80108010	1,358.89
US BANK P CARD PAYMENTS	ADVERTISING ACH PMT NO. - 80108012	988.00
US BANK P CARD PAYMENTS	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	64.33
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	278.74
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	93.04

US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	1,639.98
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	990.00
US BANK P CARD PAYMENTS	PERSONAL PROTECTIVE EQUIPMENT ACH PMT NO. - 80108012	1,283.71
US BANK P CARD PAYMENTS	POSTAGE ACH PMT NO. - 80108012	21.80
US BANK P CARD PAYMENTS	PUBLIC UTILITY SERVICE ACH PMT NO. - 80108012	89.52
US BANK P CARD PAYMENTS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108012	659.98
US BANK P CARD PAYMENTS	SMALL TOOLS ACH PMT NO. - 80108012	1,443.09
US BANK P CARD PAYMENTS	UTILITY LIGHT/POWER SERVICE ACH PMT NO. - 80108012	114.40

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

WHITE CAP LP	OPERATING RENTALS/LEASES ACH PMT NO. - 80107900	1,090.00
WHITWORTH WATER DISTRICT NO 2	PUBLIC UTILITY SERVICE CHECK NO. - 00589429	113.02
WILLIAM J THOMAS	LODGING CHECK NO. - 00589359	127.18
WILLIAM J THOMAS	OTHER TRANSPORTATION EXPENSES CHECK NO. - 00589359	252.50
WILLIAM J THOMAS	PER DIEM CHECK NO. - 00589359	91.50
TOTAL FOR 1100 - STREET FUND		51,822.87

1200 - CODE ENFORCEMENT FUND

CLARK'S CONTAINERS LLC	OPERATING RENTALS/LEASES ACH PMT NO. - 80108029	174.40
FRANCISCA RAPIER	OTHER TRANSPORTATION EXPENSES ACH PMT NO. - 80107961	240.63
FRANCISCA RAPIER	PER DIEM ACH PMT NO. - 80107961	111.50
POLLYANNE F BIRGE	OTHER TRANSPORTATION EXPENSES CHECK NO. - 00589334	240.63
POLLYANNE F BIRGE	PER DIEM CHECK NO. - 00589334	135.50
US BANK P CARD PAYMENTS	CELL PHONE ACH PMT NO. - 80108012	0.99

US BANK P CARD PAYMENTS	CLOTHING ACH PMT NO. - 80108012	197.22
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	54.49
US BANK P CARD PAYMENTS	NON-TRAVEL MEALS/LGHT RFRSHMT ACH PMT NO. - 80108012	322.54
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	964.64
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	344.00
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	350.00
TOTAL FOR 1200 - CODE ENFORCEMENT FUND		3,136.54

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

1300 - LIBRARY FUND

US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	168.55
US BANK TREASURY MANAGEMENT SERVICES	EARNINGS CREDIT CHECK NO. - 00589443	3.76-
US BANK P CARD PAYMENTS	ADVERTISING ACH PMT NO. - 80108012	2,210.50
US BANK P CARD PAYMENTS	CHEMICAL/LAB SUPPLIES ACH PMT NO. - 80108012	135.98
US BANK P CARD PAYMENTS	CONTRACTUAL SERVICES ACH PMT NO. - 80108012	174.41
US BANK P CARD PAYMENTS	CONTRIBUTIONS/DONATIONS ACH PMT NO. - 80108012	1,888.03
US BANK P CARD PAYMENTS	IT/DATA SERVICES ACH PMT NO. - 80108012	405.17
US BANK P CARD PAYMENTS	LIBRARY BOOKS/OTHER MATERIALS ACH PMT NO. - 80108012	749.52
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	2,802.69
US BANK P CARD PAYMENTS	MISC REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	984.92
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	8,786.28
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	25.05
US BANK P CARD PAYMENTS	PERMITS/OTHER FEES ACH PMT NO. - 80108012	966.00
US BANK P CARD PAYMENTS	PROFESSIONAL SERVICES ACH PMT NO. - 80108012	2,828.46

US BANK P CARD PAYMENTS	PROMOTIONAL SUPPLIES ACH PMT NO. - 80108012	101.00
US BANK P CARD PAYMENTS	RECREATIONAL SUPPLIES ACH PMT NO. - 80108012	3,833.74
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	385.00
US BANK P CARD PAYMENTS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108012	5,466.58
US BANK P CARD PAYMENTS	SAFETY SUPPLIES ACH PMT NO. - 80108012	31.34

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108012	96.27
WA STATE DEPT OF REVENUE	OPERATING SUPPLIES -	2.18
WA STATE DEPT OF REVENUE	PROMOTIONAL SUPPLIES -	9.09
WA STATE DEPT OF REVENUE	RECREATIONAL SUPPLIES -	32.89
TOTAL FOR 1300 - LIBRARY FUND		32,079.89

1360 - MISCELLANEOUS GRANTS FUND

FRANCIS ADEWALE	AIRFARE CHECK NO. - 00589333	1,053.20
FRANCIS ADEWALE	LODGING CHECK NO. - 00589333	439.26
FRANCIS ADEWALE	OTHER TRANSPORTATION EXPENSES CHECK NO. - 00589333	104.77
FRANCIS ADEWALE	PER DIEM CHECK NO. - 00589333	241.50
RICHARD WALLIS	LODGING CHECK NO. - 00589445	384.62
RICHARD WALLIS	OTHER TRANSPORTATION EXPENSES CHECK NO. - 00589445	89.99
RICHARD WALLIS	PER DIEM CHECK NO. - 00589445	197.50
TOTAL FOR 1360 - MISCELLANEOUS GRANTS FUND		2,510.84

1380 - TRAFFIC CALMING MEASURES

ALVAREZ ENVIRONMENTAL LLC 5124 W PRAIRIE AVE	PHOTO RED FINES CHECK NO. - 00589422	139.00

US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	203.58
	TOTAL FOR 1380 - TRAFFIC CALMING MEASURES	342.58

1400 - PARKS AND RECREATION FUND

ACRANET CBS BRANCH/DIV OF CBS REPORTING INC	BACKGROUND CHECKS ACH PMT NO. - 80107967	258.50

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

CARISSA WARE	OTHER TRANSPORTATION EXPENSES ACH PMT NO. - 80107966	159.71
COMCAST	IT/DATA SERVICES ACH PMT NO. - 80107856	340.03
DGT ENTERPRISES LLC DBA SPOKANE TESTING SOLUTIONS	MEDICAL SERVICES CHECK NO. - 00589418	1,445.00
FEDERAL EXPRESS CORP/DBA FEDEX	POSTAGE ACH PMT NO. - 80107983	5.22
KACIE DIETZ	OTHER TRANSPORTATION EXPENSES ACH PMT NO. - 80107956	159.71
US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	347.13
US BANK P CARD PAYMENTS	ADVERTISING ACH PMT NO. - 80108012	1,668.68
US BANK P CARD PAYMENTS	CHEMICAL/LAB SUPPLIES ACH PMT NO. - 80108012	306.31
US BANK P CARD PAYMENTS	CLOTHING ACH PMT NO. - 80108012	478.15
US BANK P CARD PAYMENTS	CONTRACTUAL SERVICES ACH PMT NO. - 80108012	768.24
US BANK P CARD PAYMENTS	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	2,762.61
US BANK P CARD PAYMENTS	GENERAL REPAIRS/MAINT ACH PMT NO. - 80108012	4,140.92
US BANK P CARD PAYMENTS	ITEMS PURCHASED FOR INVENTORY ACH PMT NO. - 80108012	13,939.33
US BANK P CARD PAYMENTS	IT/DATA SERVICES ACH PMT NO. - 80108012	173.54
US BANK P CARD PAYMENTS	LAUNDRY/JANITORIAL SERVICES ACH PMT NO. - 80108012	1,110.76
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	4,606.84
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	692.64

US BANK P CARD PAYMENTS	OPERATING RENTALS/LEASES ACH PMT NO. - 80108012	136.26
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	12,808.76
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	423.17

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	OTHER REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	65.37
US BANK P CARD PAYMENTS	PERMITS/OTHER FEES ACH PMT NO. - 80108012	1,241.00
US BANK P CARD PAYMENTS	RECREATIONAL SUPPLIES ACH PMT NO. - 80108012	1,808.35
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	3,968.80
US BANK P CARD PAYMENTS	REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	1,286.87
US BANK P CARD PAYMENTS	SMALL TOOLS ACH PMT NO. - 80108012	2,401.71
WA STATE DEPT OF REVENUE	EQUIPMENT REPAIRS/MAINTENANCE -	19.94
WA STATE DEPT OF REVENUE	MINOR EQUIPMENT -	386.91
WA STATE DEPT OF REVENUE	OFFICE SUPPLIES -	12.65
WA STATE DEPT OF REVENUE	OPERATING SUPPLIES -	137.35
WA STATE DEPT OF REVENUE	RECREATIONAL SUPPLIES -	49.50
WA STATE DEPT OF REVENUE	REGISTRATION/SCHOOLING -	37.75
	TOTAL FOR 1400 - PARKS AND RECREATION FUND	58,147.71

1425 - AMERICAN RESCUE PLAN

ACRANET CBS BRANCH/DIV OF CBS REPORTING INC	BACKGROUND CHECKS ACH PMT NO. - 80107967	109.00
	TOTAL FOR 1425 - AMERICAN RESCUE PLAN	109.00

1460 - PARKING METER REVENUE FUND

COPIERS NORTHWEST INC	OPERATING RENTALS/LEASES ACH PMT NO. - 80107857	89.96
LOOMIS ARMORED US INC	CONTRACTUAL SERVICES	

	ACH PMT NO. - 80107874	852.22
PASSPORT LABS INC	CONTRACTUAL SERVICES	
	ACH PMT NO. - 80107882	5,809.59

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK	BANK FEES	
TREASURY MANAGEMENT SERVICES	CHECK NO. - 00589443	612.54
US BANK P CARD PAYMENTS	LEGAL SERVICES	
	ACH PMT NO. - 80108012	27.00
US BANK P CARD PAYMENTS	OPERATING SUPPLIES	
	ACH PMT NO. - 80108012	250.13
	TOTAL FOR 1460 - PARKING METER REVENUE FUND	7,641.44

1560 - FORFEITURES & CONTRIBUTION FND

US BANK P CARD PAYMENTS	LEGAL SERVICES	
	ACH PMT NO. - 80108012	254.61
US BANK P CARD PAYMENTS	MINOR EQUIPMENT	
	ACH PMT NO. - 80108012	1,326.36
US BANK P CARD PAYMENTS	OPERATING SUPPLIES	
	ACH PMT NO. - 80108012	1,084.19
WA STATE DEPT OF REVENUE	MINOR EQUIPMENT	
	-	110.35
	TOTAL FOR 1560 - FORFEITURES & CONTRIBUTION FND	2,775.51

1625 - PUBLIC SAFETY PERSONNEL FUND

SPOKANE COPS	CONTRACTUAL SERVICES	
	ACH PMT NO. - 80107944	135,000.00
	TOTAL FOR 1625 - PUBLIC SAFETY PERSONNEL FUND	135,000.00

1630 - COMBINED COMMUNICATIONS CENTER

US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING	
	ACH PMT NO. - 80108012	1,071.00
	TOTAL FOR 1630 - COMBINED COMMUNICATIONS CENTER	1,071.00

1640 - COMMUNICATIONS BLDG M&O FUND

AM HARDWARE CO	REPAIR & MAINTENANCE SUPPLIES	
	ACH PMT NO. - 80108019	534.10
MCKINSTRY CO LLC	BUILDING REPAIRS/MAINTENANCE	
LOCKBOX	ACH PMT NO. - 80107997	299.75
MCKINSTRY CO LLC	REPAIR & MAINTENANCE SUPPLIES	
LOCKBOX	ACH PMT NO. - 80107997	132.04

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108012	48.85
TOTAL FOR 1640 - COMMUNICATIONS BLDG M&O FUND		1,014.74

1910 - CRIMINAL JUSTICE ASSISTANCE FD

FIREPOWER INC	BUILDING REPAIRS/MAINTENANCE ACH PMT NO. - 80107984	70.85
VOLUNTEERS OF AMERICA OF EASTERN WA & N IDAHO	CONTRACTUAL SERVICES ACH PMT NO. - 80108015	2,307.70
TOTAL FOR 1910 - CRIMINAL JUSTICE ASSISTANCE FD		2,378.55

1940 - CHANNEL FIVE EQUIPMENT RESERVE

KEY CODE MEDIA INC	MINOR EQUIPMENT ACH PMT NO. - 80107996	132.44
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	2,009.40
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	5.00
US BANK P CARD PAYMENTS	SOFTWARE (NONCAPITALIZED) ACH PMT NO. - 80108012	653.87
TOTAL FOR 1940 - CHANNEL FIVE EQUIPMENT RESERVE		2,800.71

1950 - PARK CUMULATIVE RESERVE FUND

US BANK P CARD PAYMENTS	SALE OF SCRAP/JUNK/SURPLUS ACH PMT NO. - 80108012	81.17
TOTAL FOR 1950 - PARK CUMULATIVE RESERVE FUND		81.17

1970 - FIRE/EMS FUND

ACRANET CBS BRANCH/DIV OF CBS REPORTING INC	BACKGROUND CHECKS ACH PMT NO. - 80107967	51.50
BRENDAN CRAIG	OTHER TRANSPORTATION EXPENSES ACH PMT NO. - 80107902	1,224.38
BRENDAN CRAIG	PER DIEM ACH PMT NO. - 80107902	62.50
BRIDGESTONE AMERICAS INC dba GCR TIRES & SERVICE	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108047	3,276.01

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

BRIDGESTONE AMERICAS INC dba GCR TIRES & SERVICE	VEHICLE REPAIRS/MAINT ACH PMT NO. - 80108047	440.36
CAMTEK INC	ALARM/SECURITY SERVICES ACH PMT NO. - 80107912	395.67
COLEMAN OIL COMPANY LLC	MOTOR FUEL-OUTSIDE VENDOR ACH PMT NO. - 80107914	13,886.15
COMCAST	IT/DATA SERVICES ACH PMT NO. - 80107856	461.31
DGT ENTERPRISES LLC DBA SPOKANE TESTING SOLUTIONS	MEDICAL SERVICES CHECK NO. - 00589418	13,500.00
EVERGREEN STATE TOWING LLC DBA SPOKANE VALLEY TOWING	TOWING EXPENSE ACH PMT NO. - 80107921	341.72
FASTENAL CO	OPERATING SUPPLIES ACH PMT NO. - 80107922	184.77
FASTENAL CO	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80107922	168.59
HUGHES FIRE EQUIPMENT INC	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108048	2,871.80
INLAND PACIFIC HOSE & FITTINGS INC	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108049	69.08
JAMIE J MCINTYRE	MINOR EQUIPMENT ACH PMT NO. - 80107904	220.02
JAMIE J MCINTYRE	PROMOTIONAL SUPPLIES ACH PMT NO. - 80107904	84.84
JRM ENTERPRISES INC DBA PROFESSIONAL LANGUAGE	INTERPRETER COSTS ACH PMT NO. - 80108051	140.00
KEVIN HAUGHTON	OTHER TRANSPORTATION EXPENSES ACH PMT NO. - 80107958	653.13
KEVIN HAUGHTON	PER DIEM ACH PMT NO. - 80107958	100.00
LAKEYLAND INC DBA NORTHWEST SAFETY CLEAN	CLOTHING ALTERATIONS & REPAIRS ACH PMT NO. - 80107880	199.08
MR CAR WASH DEPT #880266	VEHICLE REPAIRS/MAINT ACH PMT NO. - 80107932	208.00
NAPA AUTO PARTS GENUINE PARTS CO	MINOR EQUIPMENT ACH PMT NO. - 80107933	21.31
NAPA AUTO PARTS GENUINE PARTS CO	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80107933	953.84
PACIFIC NW EMERGENCY EQUIPMENT dba GENERAL FIRE APPARATUS	MEDICAL INSURANCE ACH PMT NO. - 80107937	329.18

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

PERFORMANCE SYSTEMS	BUILDING REPAIRS/MAINTENANCE	

INTEGRATION LLC	ACH PMT NO. - 80107938	11.94
POINTE PEST CONTROL	BUILDING REPAIRS/MAINTENANCE ACH PMT NO. - 80107939	245.25
PRO MECHANICAL SERVICES INC	BUILDING IMPROVEMENTS ACH PMT NO. - 80108059	19,549.16
ROSE CITY LABEL DBA THE BADGER	PROMOTIONAL SUPPLIES ACH PMT NO. - 80108060	627.50
SITEONE LANDSCAPE SUPPLY LLC	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108062	9.42
SPOKANE FIRE DEPARTMENT IMPREST FUND	NON-TRAVEL MEALS/LGHT RFRSHMT CHECK NO. - 00589356	26.08
STERICYCLE INC STERICYCLE OF WA (BC)	HAZARDOUS WASTE DISPOSAL ACH PMT NO. - 80107891	1,279.34
US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	191.48
US BANK TREASURY MANAGEMENT SERVICES	EARNINGS CREDIT CHECK NO. - 00589443	6.02-
US BANK P CARD PAYMENTS	ADVERTISING ACH PMT NO. - 80108012	107.44
US BANK P CARD PAYMENTS	BANK FEES ACH PMT NO. - 80108012	45.60
US BANK P CARD PAYMENTS	CLOTHING ACH PMT NO. - 80108012	600.34
US BANK P CARD PAYMENTS	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	68.16
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	9,783.88
US BANK P CARD PAYMENTS	NON-TRAVEL MEALS/LGHT RFRSHMT ACH PMT NO. - 80108012	362.17
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	838.04
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	10,407.75
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	1,184.27
US BANK P CARD PAYMENTS	PERSONAL PROTECTIVE EQUIPMENT ACH PMT NO. - 80108012	196.37
US BANK P CARD PAYMENTS	POSTAGE ACH PMT NO. - 80108012	147.13

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	PUBLICATIONS ACH PMT NO. - 80108012	250.28
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	2,760.00

US BANK P CARD PAYMENTS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108012	1,811.75
US BANK P CARD PAYMENTS	SAFETY SUPPLIES ACH PMT NO. - 80108012	518.98
US BANK P CARD PAYMENTS	SOFTWARE MAINTENANCE ACH PMT NO. - 80108012	10.05
US BANK P CARD PAYMENTS	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108012	6,034.54
US BANK P CARD PAYMENTS	VEHICLE REPAIRS/MAINT ACH PMT NO. - 80108012	43.59
WILLIAM J GONZALEZ	LODGING CHECK NO. - 00589318	164.92
WILLIAM J GONZALEZ	OTHER TRANSPORTATION EXPENSES CHECK NO. - 00589318	877.50
WILLIAM J GONZALEZ	PER DIEM CHECK NO. - 00589318	194.00
TOTAL FOR 1970 - FIRE/EMS FUND		98,184.15

1990 - TRANSPORTATION BENEFIT FUND

CPM DEVELOPMENT CORP DBA INLAND ASPHALT COMPANY	CONTRACTUAL SERVICES ACH PMT NO. - 80107830	241,280.52
TOTAL FOR 1990 - TRANSPORTATION BENEFIT FUND		241,280.52

3200 - ARTERIAL STREET FUND

COMMONSTREET CONSULTING LLC	RIGHT OF WAY ACH PMT NO. - 80107977	8,058.00
PARAMETRIX INC	CONSTRUCTION OF FIXED ASSETS ACH PMT NO. - 80108057	30,412.50
SHAMROCK PAVING CO/DIV OF MURPHY BROS INC	CONTRACTUAL SERVICES ACH PMT NO. - 80107837	132,016.68
SPOKANE COUNTY TITLE CO	CONSTRUCTION OF FIXED ASSETS ACH PMT NO. - 80107888	327.00
TOTAL FOR 3200 - ARTERIAL STREET FUND		170,814.18

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

3365 - 2018 UTGO LIBRARY CAPITAL BOND

US BANK P CARD PAYMENTS	BUILDING CONSTRUCTION ACH PMT NO. - 80108012	1,351.86
WA STATE DEPT OF REVENUE	BUILDING CONSTRUCTION -	47.23

	TOTAL FOR 3365 - 2018 UTGO LIBRARY CAPITAL BOND	1,399.09

4100 - WATER DIVISION

ACTION MATERIALS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108016	3,384.12
AGATHOS LABORATORIES INC	CHEMICAL/LAB SUPPLIES ACH PMT NO. - 80108018	7,380.65
AVISTA UTILITIES	UTILITY LIGHT/POWER SERVICE ACH PMT NO. - 80108021	502,256.88
AVISTA UTILITIES	UTILITY NATURAL GAS ACH PMT NO. - 80108021	272.44
BC ADVENTURE 1608 W PINECREST DR	REFUNDS CHECK NO. - 00589346	834.94
CDA REDI MIX & PRECAST INC	INVENTORY PURCHASES FOR WATER ACH PMT NO. - 80108027	8,355.94
CENTURYLINK	TELEPHONE CHECK NO. - 00589433	104.73
CONSOLIDATED SUPPLY CO	INVENTORY PURCHASES FOR WATER ACH PMT NO. - 80108033	193,722.12
CORE & MAIN LP	INVENTORY PURCHASES FOR WATER ACH PMT NO. - 80107859	268.80
DGT ENTERPRISES LLC DBA SPOKANE TESTING SOLUTIONS	MEDICAL SERVICES CHECK NO. - 00589418	505.00
ENVIRONMENTAL RESOURCE ASSOCIATES dba ERA	CONTRACTUAL SERVICES ACH PMT NO. - 80107825	711.23
FASTENAL CO	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108044	1,762.05
FLUME INC	CONTRACTUAL SERVICES ACH PMT NO. - 80107826	5,232.00
GENERAL INDUSTRIES INC	CONSTRUCTION OF FIXED ASSETS ACH PMT NO. - 80107827	9,603.49
GORLEY LOGISTICS LLC dba FIKES NORTHWEST	CONTRACTUAL SERVICES ACH PMT NO. - 80108046	43.49

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

INLAND POWER & LIGHT CO	UTILITY LIGHT/POWER SERVICE ACH PMT NO. - 80108050	701.94
MIMIRS WELL LLC DBA MIMIR WATER	CONTRACTUAL SERVICES ACH PMT NO. - 80107831	10,082.29
NORCO INC	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108054	88.83
NORTHWEST INDUSTRIAL SERVICES DBA AMERICAN ON SITE SERVICES	OPERATING RENTALS/LEASES ACH PMT NO. - 80108020	110.00
OXARC INC	OPERATING SUPPLIES	

	ACH PMT NO. - 80108055	5,752.88
RC SCHWARTZ & ASSOCIATES INC 159 S COWLEY ST	REFUNDS CHECK NO. - 00589345	139.47
ROBERT MCLEES	OTHER TRANSPORTATION EXPENSES CHECK NO. - 00589347	32.00
ROBERT MCLEES	PER DIEM CHECK NO. - 00589347	207.50
ROGUE HEART MEDIA INC	CONTRACTUAL SERVICES ACH PMT NO. - 80107835	14,759.09
SITEONE LANDSCAPE SUPPLY LLC	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108062	1,132.89
SPOKANE COUNTY TREASURER	PERMITS/OTHER FEES ACH PMT NO. - 80108064	200.00
TONYA M REISS	PER DIEM CHECK NO. - 00589353	207.50
T-MOBILE	TELEPHONE CHECK NO. - 00589442	90.74
US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	39.52
US BANK TREASURY MANAGEMENT SERVICES	EARNINGS CREDIT CHECK NO. - 00589443	17.30-
US BANK P CARD PAYMENTS	CHEMICAL/LAB SUPPLIES ACH PMT NO. - 80108012	2,113.01
US BANK P CARD PAYMENTS	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	56.29
US BANK P CARD PAYMENTS	INVENTORY PURCHASES FOR WATER ACH PMT NO. - 80108012	1,053.10
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	11,527.13
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	2,541.75

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	OPERATING RENTALS/LEASES ACH PMT NO. - 80108012	3,678.75
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	3,866.14
US BANK P CARD PAYMENTS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108012	30,416.59
US BANK P CARD PAYMENTS	REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	5,843.15
WA STATE DEPT OF ECOLOGY	CHEMICAL/LAB SUPPLIES ACH PMT NO. - 80108071	1,280.00
WA STATE DEPT OF REVENUE	CONTRACTUAL SERVICES -	64.01

WA STATE DEPT OF REVENUE	REPAIR & MAINTENANCE SUPPLIES -	45.13
WASHINGTON EQUIPMENT MANUFACTURING CO INC	MINOR EQUIPMENT ACH PMT NO. - 80108072	2,183.29
WHITE BLOCK COMPANY INC	REPAIR & MAINTENANCE SUPPLIES CHECK NO. - 00589446	6,921.50
TOTAL FOR 4100 - WATER DIVISION		839,555.07

4250 - INTEGRATED CAPITAL MANAGEMENT

ABADAN REPROGRAPHICS BUSINESS EQUIPMENT CENTER	CONSTRUCTION OF FIXED ASSETS CHECK NO. - 00589430	451.34
BUDINGER & ASSOCIATES INC	CONSTRUCTION OF FIXED ASSETS ACH PMT NO. - 80107974	299.84
COLIN NAAKE	LODGING CHECK NO. - 00589348	723.84
COLIN NAAKE	PER DIEM CHECK NO. - 00589348	160.97
COLUMBIA ELECTRIC SUPPLY/DIV CONSOLIDATED ELECTRICAL	CONSTRUCTION OF FIXED ASSETS ACH PMT NO. - 80108031	3,483.88
DLT SOLUTIONS LLC dba DLT SOLUTIONS	SOFTWARE (NONCAPITALIZED) ACH PMT NO. - 80107981	12,388.79
H2E INC	CONSTRUCTION OF FIXED ASSETS ACH PMT NO. - 80107988	1,003.97
INGA M NOTE	OTHER TRANSPORTATION EXPENSES ACH PMT NO. - 80107959	30.40
INGA M NOTE	PER DIEM ACH PMT NO. - 80107959	279.50

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

POWER CITY ELECTRIC INC	CONSTRUCTION OF FIXED ASSETS ACH PMT NO. - 80108004	11,050.00
SYSTEMS AND SOFTWARE INC DBA SYSTEMS AND SOFTWARE	CONTRACTUAL SERVICES ACH PMT NO. - 80108011	12,750.00
US BANK P CARD PAYMENTS	COMPUTERS ACH PMT NO. - 80108012	49.00
US BANK P CARD PAYMENTS	CONSTRUCTION OF FIXED ASSETS ACH PMT NO. - 80108012	22.90-
US BANK P CARD PAYMENTS	NON-TRAVEL MEALS/LGHT RFRSHMT ACH PMT NO. - 80108012	215.25
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	25.77
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	458.00

US BANK P CARD PAYMENTS	PUBLICATIONS ACH PMT NO. - 80108012	427.38
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	2,260.00
TOTAL FOR 4250 - INTEGRATED CAPITAL MANAGEMENT		46,035.03

4310 - SEWER MAINTENANCE DIVISION

ACTION MATERIALS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108016	2,495.91
AVISTA UTILITIES	UTILITY LIGHT/POWER SERVICE ACH PMT NO. - 80107910	1,891.81
AVISTA UTILITIES	UTILITY NATURAL GAS ACH PMT NO. - 80107910	141.97
CENTURYLINK	TELEPHONE CHECK NO. - 00589433	330.88
CPM DEVELOPMENT CORP DBA INLAND ASPHALT COMPANY	CONSTRUCTION OF FIXED ASSETS ACH PMT NO. - 80107830	34,759.45
DEVRIES INFORMATION MANAGEMENT	CONTRACTUAL SERVICES ACH PMT NO. - 80107917	8.55
DGT ENTERPRISES LLC DBA SPOKANE TESTING SOLUTIONS	MEDICAL SERVICES CHECK NO. - 00589418	50.00
FASTENAL CO	MISC REPAIRS/MAINTENANCE ACH PMT NO. - 80108044	53.58
FROSTY ICE/DIV OF R PLUM CORP EMPIRE COLD STORAGE & FROSTY	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80107926	117.72

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

HARWIN LLC DBA THE DRAIN SPECIALISTS	MISC REPAIRS/MAINTENANCE ACH PMT NO. - 80108041	768.45
NORTHWEST INDUSTRIAL SERVICES DBA AMERICAN ON SITE SERVICES	OPERATING RENTALS/LEASES ACH PMT NO. - 80107909	330.00
SITEONE LANDSCAPE SUPPLY LLC	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80107942	204.72
STELLAR INDUSTRIAL SUPPLY INC	SAFETY SUPPLIES ACH PMT NO. - 80108066	869.46
T-MOBILE	CELL PHONE CHECK NO. - 00589360	628.25
US BANK P CARD PAYMENTS	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	102.24
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	450.89
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	1,464.79
US BANK P CARD PAYMENTS	OPERATING SUPPLIES	

	ACH PMT NO. - 80108012	4,760.48
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	430.00
US BANK P CARD PAYMENTS	PARKING/TOLLS (LOCAL) ACH PMT NO. - 80108012	34.50
US BANK P CARD PAYMENTS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108012	5,040.77
US BANK P CARD PAYMENTS	SAFETY SUPPLIES ACH PMT NO. - 80108012	1,335.40
US BANK P CARD PAYMENTS	SMALL TOOLS ACH PMT NO. - 80108012	9.00
US BANK P CARD PAYMENTS	SMART PHONES, IPAD, TABLETS ACH PMT NO. - 80108012	215.82
US BANK P CARD PAYMENTS	SOFTWARE (NONCAPITALIZED) ACH PMT NO. - 80108012	126.50
VERIZON WIRELESS	CELL PHONE ACH PMT NO. - 80107950	2,445.86
WSF LLC dba WESTERN SYSTEMS &	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108075	7,680.29
TOTAL FOR 4310 - SEWER MAINTENANCE DIVISION		66,747.29

4320 - RIVERSIDE PARK RECLAMATION FAC

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

ANGELA TAGNANI	PER DIEM ACH PMT NO. - 80107963	126.00
CENTURYLINK	TELEPHONE CHECK NO. - 00589339	129.98
COPIERS NORTHWEST INC	OPERATING RENTALS/LEASES ACH PMT NO. - 80107979	505.74
DGT ENTERPRISES LLC DBA SPOKANE TESTING SOLUTIONS	MEDICAL SERVICES CHECK NO. - 00589418	150.00
EASTSIDE ELECTRIC MOTORS INTEGRATED POWER SERVICES LLC	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80107918	30,509.10
EUROFINS ENVIRONMENT TESTING NORTHWEST LLC	TESTING SERVICES ACH PMT NO. - 80107864	412.00
INLAND ENVIRONMENTAL RESOURCES INC	CHEMICAL/LAB SUPPLIES ACH PMT NO. - 80107869	8,179.79
KEMIRA WATER SOLUTIONS INC	CHEMICAL/LAB SUPPLIES ACH PMT NO. - 80107871	59,349.70
NORLIFT INC	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80107879	2,589.56
SITEONE LANDSCAPE SUPPLY LLC	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80107942	18.85

T-MOBILE	CELL PHONE CHECK NO. - 00589360	29.75
US BANK P CARD PAYMENTS	MINOR SAFETY EQUIPMENT ACH PMT NO. - 80108012	720.00
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	801.71
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	32,219.89
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	435.00
US BANK P CARD PAYMENTS	PARKING/TOLLS (LOCAL) ACH PMT NO. - 80108012	7.50
US BANK P CARD PAYMENTS	PERMITS/OTHER FEES ACH PMT NO. - 80108012	76.90
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	650.00
US BANK P CARD PAYMENTS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108012	786.91
VERIZON WIRELESS	TELEPHONE ACH PMT NO. - 80107950	1,243.84

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

WA STATE DEPT OF REVENUE	OPERATING SUPPLIES -	85.87
	TOTAL FOR 4320 - RIVERSIDE PARK RECLAMATION FAC	139,028.09

4330 - STORMWATER

AVISTA UTILITIES	UTILITY LIGHT/POWER SERVICE ACH PMT NO. - 80107910	1,985.62
AVISTA UTILITIES	UTILITY NATURAL GAS ACH PMT NO. - 80107910	37.19
CENTURYLINK	TELEPHONE CHECK NO. - 00589433	265.86
DGT ENTERPRISES LLC DBA SPOKANE TESTING SOLUTIONS	MEDICAL SERVICES CHECK NO. - 00589418	50.00
NORTH SPOKANE IRRIGATION DIST #8	PUBLIC UTILITY SERVICE CHECK NO. - 00589349	78.77
ROGUE HEART MEDIA INC	CONTRACTUAL SERVICES ACH PMT NO. - 80107835	19,367.33
US BANK P CARD PAYMENTS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108012	4,525.18
VERIZON WIRELESS	CELL PHONE ACH PMT NO. - 80107950	332.33

VERIZON WIRELESS	TELEPHONE ACH PMT NO. - 80107950	408.99
WYATT BARNETT	PERMITS/OTHER FEES ACH PMT NO. - 80108077	136.00
TOTAL FOR 4330 - STORMWATER		27,187.27

4360 - ENVIRONMENTAL PROGRAMS

LOGAN CALLEN	TUITION REIMBURSEMENT CHECK NO. - 00589316	2,524.00
SHI CORP	SOFTWARE (NONCAPITALIZED) ACH PMT NO. - 80108005	411.37
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	97.98
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	2,459.00
TOTAL FOR 4360 - ENVIRONMENTAL PROGRAMS		5,492.35

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

4480 - SOLID WASTE FUND

NOVELOZO GENERAL CONTRACTORS 1635 W WATER AVE	REFUNDS CHECK NO. - 00589440	500.00
TOTAL FOR 4480 - SOLID WASTE FUND		500.00

4490 - SOLID WASTE DISPOSAL

AVISTA UTILITIES	UTILITY LIGHT/POWER SERVICE ACH PMT NO. - 80107910	293.05
CALL2RECYCLE INC	HAZARDOUS WASTE DISPOSAL ACH PMT NO. - 80107976	1,311.99
CENTURYLINK	TELEPHONE CHECK NO. - 00589339	44.30
CINTAS CORPORATION NO 3 LOC 606	LAUNDRY/JANITORIAL SERVICES ACH PMT NO. - 80107913	16,594.35
DGT ENTERPRISES LLC DBA SPOKANE TESTING SOLUTIONS	MEDICAL SERVICES CHECK NO. - 00589418	190.00
ELJAY OIL CO INC	LUBRICANTS ACH PMT NO. - 80107862	208.63
ELJAY OIL CO INC	MOTOR FUEL-OUTSIDE VENDOR ACH PMT NO. - 80107919	2,078.25
GORLEY LOGISTICS LLC dba FIKES NORTHWEST	OPERATING SUPPLIES ACH PMT NO. - 80107923	7.25
HELFRICH BROTHERS BOILER WORKS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80107868	5,336.42

HYDRAULICS PLUS INC	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80107989	4,812.70
K & L GATES LLP	PROFESSIONAL SERVICES ACH PMT NO. - 80107994	2,498.40
NALCO CO	CHEMICAL/LAB SUPPLIES ACH PMT NO. - 80107999	3,428.85
OIL RE-REFINING CO INC	HAZARDOUS WASTE DISPOSAL ACH PMT NO. - 80108001	859.50
ONLINE CLEANING SERVICES	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80108002	9,068.80
ROBERT PRATT	PERSONAL PROTECTIVE EQUIPMENT CHECK NO. - 00589352	125.34
US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	228.59

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	357.18
US BANK P CARD PAYMENTS	HAZARDOUS WASTE DISPOSAL ACH PMT NO. - 80108012	275.77
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	292.94
US BANK P CARD PAYMENTS	MINOR SAFETY EQUIPMENT ACH PMT NO. - 80108012	299.82
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	1,781.47
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	420.87
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	580.00
US BANK P CARD PAYMENTS	PERMITS/OTHER FEES ACH PMT NO. - 80108012	2,940.00
US BANK P CARD PAYMENTS	PERSONAL PROTECTIVE EQUIPMENT ACH PMT NO. - 80108012	326.03
US BANK P CARD PAYMENTS	POSTAGE ACH PMT NO. - 80108012	121.32
US BANK P CARD PAYMENTS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108012	25,280.25
US BANK P CARD PAYMENTS	SAFETY SUPPLIES ACH PMT NO. - 80108012	417.06
US BANK P CARD PAYMENTS	SMALL TOOLS ACH PMT NO. - 80108012	584.43
VYANET OPERATIONS GROUP dba ALLIED FIRE & SECURITY	ALARM/SECURITY SERVICES ACH PMT NO. - 80107907	165.70

WA STATE DEPT OF REVENUE	EQUIPMENT REPAIRS/MAINTENANCE -	20.18
WA STATE DEPT OF REVENUE	OPERATING SUPPLIES -	198.68-
WA STATE DEPT OF REVENUE	REPAIR & MAINTENANCE SUPPLIES -	501.76
WA STATE DEPT OF REVENUE	SAFETY SUPPLIES -	37.54
TOTAL FOR 4490 - SOLID WASTE DISPOSAL		81,290.06

4500 - SOLID WASTE COLLECTION

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

ACRANET CBS BRANCH/DIV OF CBS REPORTING INC	BACKGROUND CHECKS ACH PMT NO. - 80107967	40.00
ALSCO DIVISION OF ALSCO INC	LAUNDRY/JANITORIAL SERVICES ACH PMT NO. - 80107908	3,527.22
AVISTA UTILITIES	UTILITY LIGHT/POWER SERVICE ACH PMT NO. - 80107910	9,418.38
AVISTA UTILITIES	UTILITY NATURAL GAS ACH PMT NO. - 80107910	267.58
BARR-TECH LLC	CONTRACTUAL SERVICES ACH PMT NO. - 80107973	97,886.97
C & C YARD CARE	LANDSCAPE/GROUNDS MAINT ACH PMT NO. - 80107975	1,049.13
CASCADE ENGINEERING INC	MINOR EQUIPMENT CHECK NO. - 00589338	54,105.13
DGT ENTERPRISES LLC DBA SPOKANE TESTING SOLUTIONS	MEDICAL SERVICES CHECK NO. - 00589418	290.00
FASTENAL CO	OPERATING SUPPLIES ACH PMT NO. - 80107922	255.77
GORLEY LOGISTICS LLC dba FIKES NORTHWEST	OPERATING SUPPLIES ACH PMT NO. - 80107923	72.49
LINN MACHINE & MFG	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80107931	4,157.36
SPOKANE COUNTY TREASURER	UTIL GARBAGE/WASTE REMOVAL ACH PMT NO. - 80107945	157,258.36
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	26.13
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	1,162.08
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	2,149.84

US BANK P CARD PAYMENTS	SAFETY SUPPLIES ACH PMT NO. - 80108012	718.47
US BANK P CARD PAYMENTS	SMALL TOOLS ACH PMT NO. - 80108012	361.42
WA STATE DEPT OF REVENUE	OPERATING SUPPLIES -	11.57
	TOTAL FOR 4500 - SOLID WASTE COLLECTION	332,757.90

4530 - SOLID WASTE LANDFILLS

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

AVISTA UTILITIES	UTILITY LIGHT/POWER SERVICE ACH PMT NO. - 80107910	1,308.31
CINTAS CORPORATION NO 3 LOC 606	LAUNDRY/JANITORIAL SERVICES ACH PMT NO. - 80107913	193.50
COMCAST	IT/DATA SERVICES ACH PMT NO. - 80107856	194.65
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	57.66
US BANK P CARD PAYMENTS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108012	364.90
	TOTAL FOR 4530 - SOLID WASTE LANDFILLS	2,119.02

4600 - GOLF FUND

ACRANET CBS BRANCH/DIV OF CBS REPORTING INC	BACKGROUND CHECKS ACH PMT NO. - 80107967	23.50
US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	363.07
US BANK P CARD PAYMENTS	GENERAL REPAIRS/MAINT ACH PMT NO. - 80108012	856.76
US BANK P CARD PAYMENTS	MISC REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	298.79
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	141.98
US BANK P CARD PAYMENTS	OTHER REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	2,846.80
US BANK P CARD PAYMENTS	REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	2,788.43
US BANK P CARD PAYMENTS	SMALL TOOLS ACH PMT NO. - 80108012	900.19
WA STATE DEPT OF REVENUE	REPAIRS/MAINTENANCE -	3.97

TOTAL FOR 4600 - GOLF FUND		8,223.49

4700 - DEVELOPMENT SVCS CENTER

ANDY JOHNSTON 3009 S MT VERNON ST	PERMIT REFUNDS PAYABLE CHECK NO. - 00589323	6,072.00
DYNASTY ROOFING LLC 8316 N COLTON PL	PERMIT REFUNDS PAYABLE CHECK NO. - 00589324	196.50

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

EPIC ELECTRICAL ENTERPRISES LLC	PERMIT REFUNDS PAYABLE CHECK NO. - 00589319	50.00
MARK CORDES 722 E HIGHLAND BLVD	PERMIT REFUNDS PAYABLE CHECK NO. - 00589325	248.50
OK ELECTRIC PO BOX 6545	PERMIT REFUNDS PAYABLE CHECK NO. - 00589322	40.00
PANAGOS CONSTRUCTION 16503 N SADDLEWOOD RD	PERMIT REFUNDS PAYABLE CHECK NO. - 00589321	650.00
PATRIOT ELECTRIC/LIGHTING CORP 5512 N HAVANA	PERMIT REFUNDS PAYABLE CHECK NO. - 00589320	15.00
US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	129.30
US BANK P CARD PAYMENTS	BANK FEES ACH PMT NO. - 80108012	187.65
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	89.62
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	261.20
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	499.95
US BANK P CARD PAYMENTS	PARKING/TOLLS (LOCAL) ACH PMT NO. - 80108012	169.60
US BANK P CARD PAYMENTS	PROMOTIONAL SUPPLIES ACH PMT NO. - 80108012	196.76
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	350.00
VERIZON WIRELESS	CELL PHONE ACH PMT NO. - 80108014	1,961.44
VERIZON WIRELESS	IT/DATA SERVICES ACH PMT NO. - 80108014	400.10
TOTAL FOR 4700 - DEVELOPMENT SVCS CENTER		11,517.62

5100 - FLEET SERVICES FUND

ADVANCE AUTO PARTS	VEHICLE REPAIR & MAINT SUPPLY CHECK NO. - 00589431	724.42

BATTERY SYSTEMS INC	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108023	2,631.52
BECKER BUICK-GMC INC	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108024	580.32

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

BRIDGESTONE AMERICAS INC dba GCR TIRES & SERVICE	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80107985	1,232.20
BUCK'S TIRE & AUTOMOTIVE	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80108026	109.00
CINTAS CORPORATION NO 3 LOC 606	LAUNDRY/JANITORIAL SERVICES ACH PMT NO. - 80108028	894.15
CINTAS CORPORATION NO 3 LOC 606	SAFETY SUPPLIES ACH PMT NO. - 80108028	1,048.96
COLEMAN OIL COMPANY LLC	MOTOR FUEL-OUTSIDE VENDOR ACH PMT NO. - 80108030	40,843.40
COPIERS NORTHWEST INC	OPERATING RENTALS/LEASES ACH PMT NO. - 80108035	129.20
CORWIN OF SPOKANE LLC CORWIN FORD SPOKANE	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108036	111.85
CUMMINS NORTHWEST LLC	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80108038	48,808.66
CUMMINS NORTHWEST LLC	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108038	751.76
DIRECT AUTOMOTIVE DISTRIBUTING DIV OF GEM INC	VEHICLE REPAIR & MAINT SUPPLY CHECK NO. - 00589435	1,654.82
ELJAY OIL CO INC	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108042	1,636.96
EVERGREEN STATE TOWING LLC DBA SPOKANE VALLEY TOWING	TOWING EXPENSE ACH PMT NO. - 80108043	1,375.58
GORDON TRUCK CENTERS INC DBA PACIFIC TRUCK CENTERS	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80107986	204.43
GRAINGER INC	MINOR EQUIPMENT ACH PMT NO. - 80107987	193.59
GRAINGER INC	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80107987	75.52
GWP HOLDINGS LLC DBA DOBBS PETERBILT	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108040	9,573.60
INDUSTRIAL WELDING CO INC	EQUIPMENT REPAIRS/MAINTENANCE CHECK NO. - 00589419	574.98
INLAND PACIFIC HOSE & FITTINGS INC	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80107991	62.26
JHAB3 CO DBA MEINEKE CAR CARE CENTER	EQUIPMENT REPAIRS/MAINTENANCE CHECK NO. - 00589423	1,674.43

JIT TRUCK PARTS LLC	VEHICLE REPAIR & MAINT SUPPLY CHECK NO. - 00589420	2,296.50

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

KENWORTH SALES COMPANY	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80107995	3,443.18
KENWORTH SALES COMPANY	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80107995	447.42
MOTION AUTO SUPPLY PARTS WHOLESALERS INC	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80107998	1,730.18
NAPA AUTO PARTS GENUINE PARTS CO	MINOR EQUIPMENT ACH PMT NO. - 80108000	111.29
NAPA AUTO PARTS GENUINE PARTS CO	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108000	3,981.64
PAPE MACHINERY INC	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80107881	7,749.65
PERFORMANCE RADIATOR PACIFIC LLC	VEHICLE REPAIR & MAINT SUPPLY CHECK NO. - 00589330	1,815.94
SHAMROCK AUTOMOTIVE DBA ZIEBART OF SPOKANE	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80107901	549.09
SOLID WASTE SYSTEMS INC dba SWS EQUIPMENT INC	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80107885	4,746.38
TITAN TRUCK EQUIPMENT	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80107892	1,058.50
TRANSPORT EQUIPMENT INC	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80107893	739.45
US BANK P CARD PAYMENTS	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	1,879.70
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	1,038.70
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	863.63
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	953.75
US BANK P CARD PAYMENTS	PERMITS/OTHER FEES ACH PMT NO. - 80108012	894.26
US BANK P CARD PAYMENTS	PROFESSIONAL SERVICES ACH PMT NO. - 80108012	326.70
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	6,583.50
US BANK P CARD PAYMENTS	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80108012	18,079.20
WA STATE DEPT OF REVENUE	VEHICLE REPAIR & MAINT SUPPLY -	725.23

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

WENDLE FORD NISSAN ISUZU	VEHICLE REPAIR & MAINT SUPPLY ACH PMT NO. - 80107897	998.71
WESTSIDE MOTORSPORTS	EQUIPMENT REPAIRS/MAINTENANCE ACH PMT NO. - 80107899	2,821.53
TOTAL FOR 5100 - FLEET SERVICES FUND		178,725.74

5200 - PUBLIC WORKS AND UTILITIES

COPIERS NORTHWEST INC	OPERATING RENTALS/LEASES ACH PMT NO. - 80108035	74.64
SPOKANE COUNTY TREASURER	SPOKANE COUNTY ACH PMT NO. - 80107945	3,567.47
US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	15,385.49
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	130.68
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	39.95
US POSTAL SERVICE	POSTAGE CHECK NO. - 00589444	275.00
VERIZON WIRELESS	CELL PHONE ACH PMT NO. - 80108070	85.28
WCP SOLUTIONS	OPERATING SUPPLIES CHECK NO. - 00589428	2,472.46
TOTAL FOR 5200 - PUBLIC WORKS AND UTILITIES		22,030.97

5300 - IT FUND

ARAMARK UNIFORM SERVICES AUS WEST LOCKBOX	LAUNDRY/JANITORIAL SERVICES ACH PMT NO. - 80107970	1.53
COMCAST	IT/DATA SERVICES ACH PMT NO. - 80107856	622.04
DANIEL WORDELL	OTHER TRANSPORTATION EXPENSES CHECK NO. - 00589362	378.75
DANIEL WORDELL	PER DIEM CHECK NO. - 00589362	172.50
INTELLECTYX INC	CAPITALIZED SOFTWARE ACH PMT NO. - 80107993	29,566.67
US BANK P CARD PAYMENTS	IT/DATA SERVICES ACH PMT NO. - 80108012	886.86

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	1,082.19
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	69.87
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	49.63
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	425.00
US BANK P CARD PAYMENTS	SOFTWARE MAINTENANCE ACH PMT NO. - 80108012	1,145.82
US BANK P CARD PAYMENTS	SOFTWARE (NONCAPITALIZED) ACH PMT NO. - 80108012	51.23
US POSTMASTER	PREPAID POSTAGE ACH PMT NO. - 80108013	500.00
VERTIV CORPORATION	HARDWARE MAINTENANCE ACH PMT NO. - 80107840	11,459.17
TOTAL FOR 5300 - IT FUND		46,411.26

5400 - REPROGRAPHICS FUND

ARAMARK UNIFORM SERVICES	LAUNDRY/JANITORIAL SERVICES	
AUS WEST LOCKBOX	ACH PMT NO. - 80107970	37.88
CANON FINANCIAL SERVICES INC	OPERATING RENTALS/LEASES CHECK NO. - 00589308	927.80
COPIERS NORTHWEST INC	OPERATING RENTALS/LEASES ACH PMT NO. - 80107979	2,354.54
TOTAL FOR 5400 - REPROGRAPHICS FUND		3,320.22

5500 - PURCHASING & STORES FUND

US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	80.65
US BANK P CARD PAYMENTS	OTH DUES/SUBSCRIPTNS/MEMBERSHP ACH PMT NO. - 80108012	80.00
US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	40.00
TOTAL FOR 5500 - PURCHASING & STORES FUND		200.65

5600 - ACCOUNTING SERVICES

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	51.40

TOTAL FOR 5600 - ACCOUNTING SERVICES		51.40

5700 - MY SPOKANE

ACRANET CBS BRANCH/DIV OF CBS REPORTING INC	BACKGROUND CHECKS ACH PMT NO. - 80107967	32.50
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	58.78
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	21.79
TOTAL FOR 5700 - MY SPOKANE		113.07

5750 - OFFICE OF PERFORMANCE MGMT

VERIZON WIRELESS	CELL PHONE ACH PMT NO. - 80107896	86.59
TOTAL FOR 5750 - OFFICE OF PERFORMANCE MGMT		86.59

5800 - RISK MANAGEMENT FUND

US BANK TREASURY MANAGEMENT SERVICES	BANK FEES CHECK NO. - 00589443	262.20
US BANK TREASURY MANAGEMENT SERVICES	EARNINGS CREDIT CHECK NO. - 00589443	103.10-
US BANK OR CITY TREASURER LIABILITY CLAIMS	INSURANCE CLAIMS ACH PMT NO. - 80107895	7,388.70
TOTAL FOR 5800 - RISK MANAGEMENT FUND		7,547.80

5810 - WORKERS' COMPENSATION FUND

US BANK P CARD PAYMENTS	REGISTRATION/SCHOOLING ACH PMT NO. - 80108012	397.00-
TOTAL FOR 5810 - WORKERS' COMPENSATION FUND		397.00-

5830 - EMPLOYEES BENEFITS FUND

DELTA DENTAL OF WASHINGTON	INSURANCE ADMINISTRATION ACH PMT NO. - 80108039	13,800.60

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

DELTA DENTAL OF WASHINGTON	INSURANCE CLAIMS ACH PMT NO. - 80108039	39,241.13
KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	INSURANCE ADMINISTRATION ACH PMT NO. - 80108052	77,696.71
KAISER FOUNDATION HEALTH PLAN	INSURANCE CLAIMS	

OF WASHINGTON	ACH PMT NO. - 80108052	87,893.08
KAISER FOUNDATION HEALTH PLAN OF WASHINGTON	INSURANCE PREMIUMS ACH PMT NO. - 80108052	22,181.60
PREMERA BLUE CROSS	INSURANCE ADMINISTRATION ACH PMT NO. - 80108058	55,664.44
PREMERA BLUE CROSS OR SPOKANE CITY TREASURER	INSURANCE CLAIMS ACH PMT NO. - 80107940	498,739.68
US BANK P CARD PAYMENTS	MINOR EQUIPMENT ACH PMT NO. - 80108012	25.94
US BANK P CARD PAYMENTS	OFFICE SUPPLIES ACH PMT NO. - 80108012	81.39
TOTAL FOR 5830 - EMPLOYEES BENEFITS FUND		795,324.57

5900 - FACILITIES MANAGEMENT FUND OPS

ADVANCED FIRE SYSTEMS INC	BUILDING REPAIRS/MAINTENANCE CHECK NO. - 00589432	363.00
CRANETECH INC	BUILDING REPAIRS/MAINTENANCE CHECK NO. - 00589434	1,000.00
HOME DEPOT USA INC THE HOME DEPOT PRO-SUPPLYWORKS	OPERATING SUPPLIES ACH PMT NO. - 80107870	582.62
INLAND ELEVATOR LLC	BUILDING REPAIRS/MAINTENANCE ACH PMT NO. - 80107990	235.44
NALCO CO	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80107877	3,241.57
NATIONSERVE OVERHEAD DOOR CORPORATION	BUILDING REPAIRS/MAINTENANCE CHECK NO. - 00589331	2,103.70
NIKKI HANSHAW	LOCAL MILEAGE ACH PMT NO. - 80108078	92.63
ORKIN	BUILDING REPAIRS/MAINTENANCE CHECK NO. - 00589425	113.36
SHI CORP	IT/DATA SERVICES ACH PMT NO. - 80108005	489.88
SPOKANE CONCRETE CUTTING INC	BUILDING REPAIRS/MAINTENANCE CHECK NO. - 00589427	1,941.56

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

US BANK P CARD PAYMENTS	BUILDING REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	1,941.73
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	1,522.97
US BANK P CARD PAYMENTS	OTHER REPAIRS/MAINTENANCE ACH PMT NO. - 80108012	174.59
US BANK P CARD PAYMENTS	REPAIR & MAINTENANCE SUPPLIES ACH PMT NO. - 80108012	5,654.67

WA STATE DEPT OF REVENUE	BUILDING REPAIRS/MAINTENANCE -	102.94
WA STATE DEPT OF REVENUE	OTHER REPAIRS/MAINTENANCE -	15.71
TOTAL FOR 5900 - FACILITIES MANAGEMENT FUND OPS		19,576.37

5901 - ASSET MANAGEMENT FUND CAPITAL

US BANK P CARD PAYMENTS	SOFTWARE (NONCAPITALIZED) ACH PMT NO. - 80108012	180.00-
TOTAL FOR 5901 - ASSET MANAGEMENT FUND CAPITAL		180.00-

5902 - PROPERTY ACQUISITION POLICE

US BANK P CARD PAYMENTS	CLOTHING ACH PMT NO. - 80108012	58.41
US BANK P CARD PAYMENTS	OPERATING SUPPLIES ACH PMT NO. - 80108012	859.00
WA STATE DEPT OF REVENUE	OPERATING SUPPLIES -	77.31
TOTAL FOR 5902 - PROPERTY ACQUISITION POLICE		994.72

6080 - POLICE PENSION FUND

US BANK TRUST NA OR CITY OF SPOKANE	PURCHASE OF INVESTMENTS ACH PMT NO. - 80107894	50,000.00
TOTAL FOR 6080 - POLICE PENSION FUND		50,000.00

6100 - RETIREMENT

ALLIED ENVELOPE	PRINTING/BINDING/REPRO ACH PMT NO. - 80107848	119.13

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

TOTAL FOR 6100 - RETIREMENT	119.13

6200 - FIREFIGHTERS' PENSION FUND

ALLIED ENVELOPE	PRINTING/BINDING/REPRO ACH PMT NO. - 80107848	64.20
DELTA DENTAL OF WASHINGTON	INSURANCE ADMINISTRATION ACH PMT NO. - 80108039	1,183.58
DELTA DENTAL OF WASHINGTON	SERVICE REIMBURSEMENT ACH PMT NO. - 80108039	915.00

GALEN PETERSON	SERVICE REIMBURSMENT CHECK NO. - 00589350	913.00
GERARD T DEATHERAGE	SERVICE REIMBURSMENT CHECK NO. - 00589341	425.00
GERAS LLC DBA FAMILY RESOURCE HOME CARE	SERVICE REIMBURSEMENT CHECK NO. - 00589343	3,536.00
LLOYD C WOLESLAGLE JR	SERVICE REIMBURSMENT CHECK NO. - 00589361	329.36
MADRONA PEAK LLC GENERATIONS HOME CARE	SERVICE REIMBURSEMENT CHECK NO. - 00589342	4,525.50
NORTH RIDGE HOUSE INC	SERVICE REIMBURSEMENT ACH PMT NO. - 80107936	10,000.00
NORTH RIDGE HOUSE INC	SERVICE REIMBURSMENT ACH PMT NO. - 80107936	9,470.00
PREMERA BLUE CROSS	INSURANCE ADMINISTRATION ACH PMT NO. - 80108058	7,207.72
PREMERA BLUE CROSS OR SPOKANE CITY TREASURER	SERVICE REIMBURSEMENT ACH PMT NO. - 80107940	56,285.56
ROGER GLANVILLE	SERVICE REIMBURSEMENT CHECK NO. - 00589344	133.00
ROGER GLANVILLE	SERVICE REIMBURSMENT CHECK NO. - 00589344	1,399.99
ROSAUER'S PHARMACY	SERVICE REIMBURSMENT CHECK NO. - 00589355	61.24
SPOKANE LIFELINE INC	SERVICE REIMBURSMENT CHECK NO. - 00589357	27.23
UNITED METHODIST HOMES dba ROCKWOOD SOUTH HILL	SERVICE REIMBURSEMENT CHECK NO. - 00589354	6,955.00
TOTAL FOR 6200 - FIREFIGHTERS' PENSION FUND		103,431.38

PROCESSING OF VOUCHERS RESULTS IN CLAIMS AS FOLLOWS:

6300 - POLICE PENSION

BROOKDALE SENIOR LIVING COMMUNITIES INC	SERVICE REIMBURSMENT CHECK NO. - 00589337	8,925.94
CRISTA SENIOR COMMUNITY ASSISTED LIVING	SERVICE REIMBURSEMENT CHECK NO. - 00589340	4,995.00
CRISTA SENIOR COMMUNITY ASSISTED LIVING	SERVICE REIMBURSMENT CHECK NO. - 00589340	2,780.00
DELTA DENTAL OF WASHINGTON	INSURANCE ADMINISTRATION ACH PMT NO. - 80108039	955.42
DELTA DENTAL OF WASHINGTON	SERVICE REIMBURSEMENT ACH PMT NO. - 80108039	2,022.00
FRED UTTKE	SERVICE REIMBURSMENT ACH PMT NO. - 80107964	126.28

GREGORY C HARSHMAN	SERVICE REIMBURSMENT ACH PMT NO. - 80107957	318.40
JAMES F POWELL	SERVICE REIMBURSMENT CHECK NO. - 00589351	320.00
PREMERA BLUE CROSS	INSURANCE ADMINISTRATION ACH PMT NO. - 80108058	5,818.28
PREMERA BLUE CROSS OR SPOKANE CITY TREASURER	SERVICE REIMBURSEMENT ACH PMT NO. - 80107940	93,001.18
ROSAUER'S PHARMACY	SERVICE REIMBURSMENT CHECK NO. - 00589355	1,118.95
SULLIVAN VENTURES, LLC DBA SULLIVAN PARK ASSISTED LVG	SERVICE REIMBURSEMENT CHECK NO. - 00589358	4,425.00
SULLIVAN VENTURES, LLC DBA SULLIVAN PARK ASSISTED LVG	SERVICE REIMBURSMENT CHECK NO. - 00589358	1,700.00
	TOTAL FOR 6300 - POLICE PENSION	126,506.45

6920 - CLAIMS CLEARING FUND

ESTATE OF KATHRYN LEWIS C/O GRAVIS LAW	ACCOUNTS PAYABLE CHECK NO. - 00589436	4,382.11
	TOTAL FOR 6920 - CLAIMS CLEARING FUND	4,382.11
	TOTAL CLAIMS	3,903,685.00

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	10/5/2022
		Clerk's File #	CPR 2022-0003
		Renews #	
Submitting Dept	ACCOUNTING	Cross Ref #	
Contact Name/Phone	MICHELLE MURRAY 6032	Project #	
Contact E-Mail	MMURRAY@SPOKANECITY.ORG	Bid #	
Agenda Item Type	Claim Item	Requisition #	
Agenda Item Name	5600-ACCOUNTING-PAYROLL		

Agenda Wording

Report of the Mayor of pending payroll claims of previously approved obligations through: October 1, 2022. Payroll check #565593 through check #565793 $14,474,545.56

Summary (Background)

N/A

Lease? NO Grant related? NO Public Works? NO

Fiscal Impact		Budget Account
Expense	$ 14,474,545.56	# N/A
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	MURRAY, MICHELLE	Study Session\Other	
Division Director	WALLACE, TONYA	Council Sponsor	
Finance	MURRAY, MICHELLE	Distribution List	
Legal	PICCOLO, MIKE		
For the Mayor	ORMSBY, MICHAEL		
Additional Approvals			
Purchasing			

PAYROLL RECAP BY FUND
PAY PERIOD ENDING OCTOBER 1, 2022

FUND	FUND NAME	TOTAL
0100	GENERAL FUND	
0030	POLICE OMBUDSMAN	11,354.40
0230	CIVIL SERVICE	37,222.10
0260	CITY CLERK	17,434.42
0320	COUNCIL	76,761.74
0330	PUBLIC AFFAIRS / COMMUNICATIONS	31,943.36
0370	ENGINEERING SERVICES	193,711.47
0410	FINANCE	39,373.65
0430	GRANTS MNGMT & FINANCIAL ASSIST	6,209.60
0450	CD/HS DIVISION	11,316.80
0470	HISTORIC PRESERVATION	7,292.80
0480	OFFICE OF CIVIL RIGHTS,EQUITY, & INCLUSION	2,902.40
0500	LEGAL	123,504.50
0520	MAYOR	21,030.96
0550	NEIGHBORHOOD SERVICES	8,362.40
05601	MUNICIPAL COURT	114,375.17
05602	PARKING VIOLATIONS	0.00
0570	OFFICE OF HEARING EXAMINER	7,275.20
0620	HUMAN RESOURCES	19,252.36
0650	PLANNING SERVICES	48,225.36
0680	POLICE	1,895,477.22
0690	PROBATION SERVICES	48,547.00
0700	PUBLIC DEFENDERS	83,370.95
0750	ECONOMIC DEVELOPMENT	8,498.40
0860	TREASURER	0.00
	TOTAL GENERAL FUND	2,813,442.26

FUND	FUND NAME	TOTAL
1100	STREET	275,398.78
1200	CODE ENFORCEMENT	58,527.67
1300	LIBRARY	200,593.38
1390	URBAN FORESTRY FUND	0.00
1400	PARKS AND RECREATION	334,287.45
1425	AMERICAN RESCUE PLAN	3,418.25
1460	PARKING METER	33,312.91
1510	LAW ENFORCEMENT INFO SYSTEM FUND	0.00
1620	PUBLIC SAFETY & JUDICIAL GRANT	18,077.83
1625	PUBLIC SAFETY PERSONNEL	156,376.43
1630	COMBINED COMMUNICATIONS CENTER	252,856.85
1680	CD/HS	55,805.14
1970	EMS FUND	7,697,020.67
4100	WATER	471,587.15
4250	INTEGRATED CAPITAL FUND	51,886.24
4300	SEWER	592,072.93
4480	REFUSE	612,033.10
4490	SOLID WASTE	0.00
4530	LANDFILLS	0.00
4600	GOLF	66,262.75
4700	GENERAL SERVICES FUND	162,883.32
5100	FLEET SERVICE	129,005.75
5200	PUBLIC WORKS & UTILITY FUND	47,927.32
5300	MIS	186,764.08
5400	REPROGRAPHICS	7,443.21
5500	PURCHASING	20,639.68
5600	ACCOUNTING SERVICES	111,165.94
5700	MY SPOKANE	28,563.18
5750	PROJECT MANAGEMENT OFFICE	18,970.40
5810	WORKER'S COMPENSATION	15,376.05
5830	SELF-FUNDED MEDICAL/DENTAL	9,168.80
5900	ASSET MANAGEMENT	32,222.04
6060	CITY RETIREMENT	11,456.00
	TOTAL	14,474,545.56

MINUTES OF SPOKANE CITY COUNCIL

Monday, September 26, 2022

BRIEFING SESSION

The Briefing Session of the Spokane City Council held on the above date was called to order at 3:33 p.m. in the Council Chambers in the Lower Level of the Municipal Building, 808 West Spokane Falls Boulevard, Spokane, Washington.

Roll Call

On roll call, Council President Beggs and Council Members Bingle, Cathcart, Kinnear, Stratton, Wilkerson, and Zappone were present.

Assistant City Attorney and Interim HR Director Mike Piccolo; Hannahlee Allers, Director-City Council Office; Assistant City Attorney Lauren Beattie; and City Clerk Terri Pfister were also present for the meeting. City Administrator Johnnie Perkins was absent.

Advance Agenda Review

Council Members and staff provided an overview of the October 3, 2022, Advance Agenda items.

Action to Approve October 3, 2022, Advance Agenda

Following reports and Council inquiry and discussion regarding the October 3, 2022, Advance Agenda items, the City Council took the following action (pursuant to Council Rule 2.1.B):

> **Motion** by Council Member Bingle, seconded by Council Member Wilkerson, **to approve** the October 3, 2022, Advance Agenda; **carried 7-0.**

Current Agenda Review

The City Council reviewed the September 26, 2022, Current Agenda for any changes.

Suspension of Council Rules

Motion by Council Member Kinnear, seconded by Council Member Zappone, **to suspend** Council Rules for purposes of adding items to the agenda; **carried 7-0.**

Resolution 2022-0089

Motion by Council Member Zappone, seconded by Council Member Wilkerson, **to add** Resolution 2022-0089—committing the City of Spokane to work with the Washington State Legislature to pursue funding for a new Regional Law Enforcement Training Center—**carried 7-0.**

Special Budget Ordinance C36193 (Deferred from September 12, 2022, Agenda) (Council Sponsors: Council Members Cathcart and Bingle)
Council Member Cathcart presented a motion to amend Special Budget Ordinance C36193. Discussion ensued, and the following action was taken:

> **Motion** by Council Member Cathcart (no second provided) **to amend** Special Budget Ordinance C36193 by taking out the $125,000 for the drug prevention out of the forfeiture funds and instead fund it through ARPA as an alternative; **rejected 3-4.**

Special Budget Ordinance C36234 (Council Sponsors: Council Members Kinnear and Cathcart)
Motion by Council Member Zappone, seconded by Council Member Kinnear, **to change** the appropriation amount to $153,000 from $283,000 and strike through the $70,000 for flooring and carpeting and $60,000 for upgrading the AV equipment - striking through "A" and "C;" **carried 4-3.**

Special Budget Ordinance C36277 (Council Sponsors: Council Members Cathcart and Bingle)
Motion by Council Member Kinnear, seconded by Council Member Wilkerson, **to defer** Special Budget Ordinance C36277 (arising from the need to increase staffing at the downtown precinct and in Police IT) for two weeks, to October 10, 2022; **carried 6-1.**

Final Reading Ordinance C36271 (Council Sponsors: Council President Beggs and Council Member Wilkerson)
Motion by Council Member Kinnear, seconded by Council Member Wilkerson, **to adopt** the amended version of Final Reading Ordinance C36271 (related to the permitted use of forfeiture funds) circulated by Council President Beggs before 1:00 p.m. today; **carried 4-3.**

Council Recess/Executive Session
The City Council Briefing Session ended at 4:50 p.m. No Executive Session was held. The City Council reconvened at 6:04 p.m. for the Legislative Session.

LEGISLATIVE SESSION

Pledge of Allegiance
The Pledge of Allegiance was led by Council President Beggs.

Roll Call
On roll call, Council President Beggs and Council Members Bingle, Cathcart, Kinnear, Stratton, Wilkerson, and Zappone were present.

Hannahlee Allers, Director-City Council Office and City Clerk Terri Pfister were also present for the meeting. Assistant City Attorney Lauren Beattie was absent.

MAYORAL PROCLAMATION
September 12-16, 2022 *Deaf Awareness Week*
Council Member Bingle read the proclamation. No individuals were present to accept the proclamation. See attachment to these minutes for the full proclamation.

There were no **Council Committee Reports.**

There were no **Reports from Neighborhood Councils.**

There were no **Boards and Commissions Appointments.**

There were no **Administrative Reports.**

CONSENT AGENDA

Subsequent to an opportunity for public testimony and an opportunity for Council commentary, with no individuals requesting to speak, the following action was taken:

Upon 7-0 Voice Vote (in the affirmative), the City Council approved Staff Recommendations for the following items:

5-year Value Blanket Order with Oxarc, Inc. (Spokane) for liquid chlorine for the Water Department—estimated annual expenditure $150,000 (plus tax as needed). (OPR 2022-0647 / RFQ 5714-22) (Council Sponsors: Council Members Stratton and Zappone)

Public Works Agreement between the City of Spokane and YOY, Inc. dba Verdis (Coeur d'Alene, ID) for removal and replacement of the Garden Park Reservoir Pumphouse roof from October 1, 2022, through September 30, 2023—$88,484 (incl. tax). (OPR 2022-0648) (Council Sponsor: Council Member Cathcart)

Contract Amendment with Craig Trueblood and K&L Gates, LLP (Seattle, WA) to act as Outside Special Counsel to provide legal advice and counsel regarding environmental matters for the Wastewater Management Department—additional $40,000. Total contract amount: $193,000. (OPR 2018-0252) (Council Sponsor: Council Member Kinnear)

Multiple Family Housing Property Tax Exemption Conditional Agreements with:

a. 51-09036, LLC for the future construction of approximately 167 units at Parcel Numbers 35184.0502, .0503, .0504, commonly known as 7, 11, & 17 W. Spokane Falls Boulevard. (OPR 2022-0649)

b. Sigitov, Andrey & Liya / Sigitov, Mikhail & Lyudmila for the future construction of approximately 4 units at Parcel Number 35162.2208, commonly known as 1525 E. Desmet Avenue. (OPR 2022-0650)

c. 1727 E Hartson, LLC for the future construction of approximately 28 units at Parcel Number 35212.2910, commonly known as 1727 E. Hartson Avenue. (OPR 2022-0651)

d. Idaho, LLC for the future construction of approximately 9 units at Parcel Number 25131.5106, commonly known as 1801 W. Mallon Avenue. (OPR 2022-0652)

e. Howard Partners, LLC & Gerry's Trees & Nursery, Inc. for the future construction of approximately 8 units at Parcel Number 35184.1904, commonly known as 220 N. Howard Street. (OPR 2022-0653)

f. Brakly Investments, LLC for the future construction of approximately 9 units at Parcel Number 25131.5401, commonly known as 2001 W. Boone Avenue. (OPR 2022-0654)

The Conditional Agreements will ultimately result in the issuance of a final certificate of tax exemption to be filed with the Spokane County Assessor's Office post construction. (Council Sponsors: Council Members Stratton and Zappone)

Report of the Mayor of pending:

a. Claims and payments of previously approved obligations, including those of Parks and Library, through September 16, 2022, total $10,767,473.85 (Check Nos. 588921-589132; ACH Payment 107248-107499), with Parks and Library claims approved by their respective boards. Warrants excluding Parks and Library total $8,895,066.92. (CPR 2022-0002)

b. Payroll claims of previously approved obligations through September 17, 2022: $8,669,703.30 (Payroll Check No. 565452-565592). (CPR 2022-0013)

City Council Meeting Minutes: September 8 and September 12, 2022. (CPR 2022-0013)

LEGISLATIVE AGENDA

SPECIAL BUDGET ORDINANCES
Special Budget Ordinance C36193 (Deferred from September 12, 2022, Agenda) (Council Sponsors: Council Members Cathcart and Bingle)

Subsequent to a brief overview by Council President Beggs, public testimony, and Council commentary, the following action was taken:

> **Upon 4-3 Roll Call Vote,** the City Council **rejected Special Budget Ordinance C36193** amending Ordinance No. C36161 passed by the City Council December 13, 2021, and entitled, "An Ordinance adopting the Annual Budget of the City of Spokane for 2022, making appropriations to the various funds of the City of Spokane government for the fiscal year ending December 31, 2022, and providing it shall take effect immediately upon passage," and declaring an emergency and appropriating funds in:
>
> Forfeitures & Contributions Fund
> 1) Increase appropriations by $175,000.
> A) Of the increased appropriations; $40,000 of the increase is to be used as confidential funds used for controlled purchases of illegal substances.
> B) $125,000 shall be used to fund a request for proposal to non-profit entities that provide at-risk youth services that will support prevention of drug use and drug crimes using peer support and leadership from individuals who have successfully exited criminal justice involvement.
> C) $10,000 for training.
> 2) The increased appropriation is funded from unappropriated reserves in the Forfeitures & Contributions Fund.
>
> **Ayes:** Beggs, Kinnear, Wilkerson, and Zappone
> **Nays:** Bingle, Cathcart, and Stratton
> **Abstain:** None
> **Absent:** None
>
> (Note: Special Budget Ordinances require five affirmative roll call votes for passage.)

Special Budget Ordinance C36234 (As Amended During the 3:30 p.m. Briefing Session) (Deferred from August 22, 2022, Agenda) (Council Sponsors: Council Members Kinnear and Cathcart)

Subsequent to an opportunity for public testimony, with no individuals requesting to speak, and Council commentary, the following action was taken:

> **Upon 7-0 Roll Call Vote,** the City Council **passed Special Budget Ordinance C36234** (as amended) amending Ordinance No. C36161 passed by the City Council December 13, 2021, and entitled, "An Ordinance adopting the Annual Budget of the City of Spokane for 2022, making appropriations to the various funds of the City of Spokane government for the fiscal year ending December 31, 2022, and providing it shall take effect immediately upon passage," and declaring an emergency and appropriating funds in:

Public Safety & Judicial Grant Fund
1) Increase the appropriation by $153,000.
A. Of the increased appropriation, $150,000 is provided solely for upgrading and installing a new target turning system at the firing range.
B.Of the increased appropriation, $3,000 is provided solely for additional training courses.
C.The increased appropriation is funded from the balance in the Public Safety & Judicial Grant Fund unappropriated reserves portion of the state distribution to assist with one-time costs related to law enforcement and criminal justice related legislation.

(This action arises from the need to update training facilities and equipment.)

Ayes: Beggs, Bingle, Cathcart, Kinnear, Stratton, Wilkerson, and Zappone
Nays: None
Abstain: None
Absent: None

Special Budget Ordinance C36278 (Council Sponsors: Council President Beggs and Council Member Stratton)
Subsequent to a brief overview by Community and Economic Development Director Steve MacDonald and the opportunity for public testimony and Council commentary, with no individuals requesting to speak, the following action was taken:

Upon 7-0 Roll Call Vote, the City Council **passed Special Budget Ordinance C36278** amending Ordinance No. C36161 passed by the City Council December 13, 2021, and entitled, "An Ordinance adopting the Annual Budget of the City of Spokane for 2022, making appropriations to the various funds of the City of Spokane government for the fiscal year ending December 31, 2022, and providing it shall take effect immediately upon passage," and declaring an emergency and appropriating funds in:

Code Enforcement Fund
1) Decrease the appropriation for a Laborer I position by $18,750.
2) Add one Director of Code Enforcement & Parking Services position in the Code Enforcement department. This action increases the number of Director of Code Enforcement & Parking Services from 0 to 0.5.
3) Increase the appropriation for Director of Code Enforcement & Parking Services by $18,750. The appropriation provides budget authority for salary and benefits through the rest of the current fiscal year.
(A) There is no change to the overall appropriation level in the Code Enforcement Fund.

and

Parking System Fund
1) Decrease the appropriation for a Parking Enforcement Specialist I position by $18,750.
2) Add one Director of Code Enforcement & Parking Services position in the Parking Meter Revenue department. This action increases the number of Director of Code Enforcement & Parking Services from 0 to 0.5.
3) Increase the appropriation for Director of Code Enforcement & Parking Services by $18,750. The appropriation provides budget authority for salary and benefits through the rest of the current fiscal year.
(B) There is no change to the overall appropriation level in the Parking System Fund.

(This action arises from the need to create a director position for code and parking.)

Ayes: Beggs, Bingle, Cathcart, Kinnear, Stratton, Wilkerson, and Zappone
Nays: None
Abstain: None
Absent: None

Special Budget Ordinance C36279 (Council Sponsors: Council Members Stratton and Wilkerson)
Subsequent to an opportunity for public testimony and Council commentary, with no individuals requesting to speak, the following action was taken:

Upon 7-0 Roll Call Vote, the City Council **passed Special Budget Ordinance C36279** amending Ordinance No. C36161 passed by the City Council December 13, 2021, and entitled, "An Ordinance adopting the Annual Budget of the City of Spokane for 2022, making appropriations to the various funds of the City of Spokane government for the fiscal year ending December 31, 2022, and providing it shall take effect immediately upon passage," and declaring an emergency and appropriating funds in:

Continuum of Care Fund
1) Increase revenue by $2,687,684.
A) Of the increased revenue, $2,687,684 is provided to the City of Spokane for the Youth Homelessness Demonstration Program (YHDP) grant from the U.S. Department of Housing and Urban Development (HUD).
2) Increase appropriation by $2,687,684.
A) Of the increased appropriation, $2,613,049 is provided solely for contractual services provided by subrecipients that will implement the coordinated community plan for the YHDP.
B) Of the increased appropriation, $74,635 is provided solely for the City's administration of the YHDP.

(This action arises from the need to adjust the budget for a grant awarded to the City for the Youth Homelessness Demonstration Program.)

Ayes: Beggs, Bingle, Cathcart, Kinnear, Stratton, Wilkerson, and Zappone
Nays: None
Abstain: None
Absent: None

For Council action on Special Budget Ordinance C36277, see section of minutes under 3:30 p.m. Briefing Session.

There were no Emergency Ordinances.

RESOLUTIONS

Resolution 2022-0083 (Council Sponsors: Council President Beggs and Council Member Stratton)

Subsequent to an introduction by Community and Economic Development Director Steven MacDonald; an opportunity for public testimony, with no individuals requesting to speak; and Council commentary, the following action was taken:

Upon 7-0 Roll Call Vote, the City Council **adopted Resolution 2022-0083** approving the appointment of Tami Palmquist as the Director of Development Services Center.

Ayes: Beggs, Bingle, Cathcart, Kinnear, Stratton, Wilkerson, and Zappone
Nays: None
Abstain: None
Absent: None

Resolution 2022-0084 (Council Sponsors: Council President Beggs and Council Member Stratton)

Subsequent to an introduction by Community and Economic Development Director Steven MacDonald; an opportunity for public testimony, with no individuals requesting to speak; and Council commentary, the following action was taken:

Upon 7-0 Roll Call Vote, the City Council **adopted Resolution 2022-0084** approving the appointment of Luis Garcia as the Director of Parking Services and Code Enforcement.

Ayes: Beggs, Bingle, Cathcart, Kinnear, Stratton, Wilkerson, and Zappone
Nays: None

Abstain: None
Absent: None

Resolution 2022-0085 (Council Sponsors: Council Members Wilkerson and Bingle)
Subsequent to an opportunity for public testimony, with no individuals requesting to speak, and Council commentary, the following action was taken:

> **Upon 7-0 Roll Call Vote**, the City Council **adopted Resolution 2022-0085** approving the appointment of Jason Nechanicky as the Director of Contracts and Purchasing.
>
> **Ayes:** Beggs, Bingle, Cathcart, Kinnear, Stratton, Wilkerson, and Zappone
> **Nays:** None
> **Abstain:** None
> **Absent:** None

Resolution 2022-0086 (Council Sponsors: Council Members Bingle and Cathcart)
Subsequent to an opportunity for public testimony and Council commentary, with no individuals requesting to speak, the following action was taken:

> **Upon 7-0 Roll Call Vote**, the City Council **adopted Resolution 2022-0086** setting the Assessment Roll Hearing before City Council for December 5, 2022, for the Downtown Parking and Business Improvement Area (Business Improvement District – BID) and providing notice of the 2023 assessments to business and property owners.
>
> **Ayes:** Beggs, Bingle, Cathcart, Kinnear, Stratton, Wilkerson, and Zappone
> **Nays:** None
> **Abstain:** None
> **Absent:** None

Resolution 2022-0087 (Council Sponsors: Council Members Bingle and Cathcart)
Subsequent to an opportunity for public testimony and Council commentary, with no individuals requesting to speak, the following action was taken:

> **Upon 7-0 Roll Call Vote**, the City Council **adopted Resolution 2022-0087** setting the Assessment Roll Hearing before City Council for December 5, 2022, for the East Sprague Parking and Business Improvement Area (Business Improvement District – BID) and providing notice of the 2023 assessments to business and property owners.
>
> **Ayes:** Beggs, Bingle, Cathcart, Kinnear, Stratton, Wilkerson, and Zappone

Nays: None
Abstain: None
Absent: None

Resolution 2022-0089 (Council Sponsors: Council President Beggs and Council Member Zappone)

A full reading of Resolution 2022-0089 was provided by the City Clerk, after which Council Member Zappone provided an overview of the resolution. Subsequent to an opportunity for public testimony, with no individuals requesting to speak, and Council commentary, the following action was taken:

> **Upon 7-0 Roll Call Vote**, the City Council **adopted Resolution 2022-0089 c**ommitting the City of Spokane to work with the Washington State Legislature to pursue funding for a new Regional Law Enforcement Training Center.
>
> **Ayes:** Beggs, Bingle, Cathcart, Kinnear, Stratton, Wilkerson, and Zappone
> **Nays:** None
> **Abstain:** None
> **Absent:** None

FINAL READING ORDINANCES

Final Reading Ordinance C36260 (First Reading held August 22, 2022) (Council Sponsors: Council Members Zappone and Stratton)

Subsequent to an opportunity for public testimony, with no individuals requesting to speak, and the opportunity for Council commentary, the following action was taken:

> **Upon 7-0 Roll Call Vote**, the City Council **passed Final Reading Ordinance C36260,** vacating portions of Boy Scout Way and Gardner Avenue between Washington Street and Howard Street.
>
> **Ayes:** Beggs, Bingle, Cathcart, Kinnear, Stratton, Wilkerson, and Zappone
> **Nays:** None
> **Abstain:** None
> **Absent:** None

Final Reading Ordinance C36271 (As Amended During the 3:30 p.m. Briefing Session) (Council Sponsors: Council President Beggs and Council Member Wilkerson)

Subsequent to an overview of Ordinance C36271 by Council President Beggs, public testimony, and Council commentary, the following action was taken:

Upon 4-3 Roll Call Vote, the City Council **passed Final Reading Ordinance C36271** (as amended) relating to the permitted use of forfeiture funds; amending sections 8.19.030 and .040 of the Spokane Municipal Code.

Ayes: Beggs, Kinnear, Wilkerson, and Zappone
Nays: Bingle, Cathcart, and Stratton
Abstain: None
Absent: None

FIRST READING ORDINANCES
The following Ordinance was read for the first time, with further action deferred. There was an opportunity for public testimony on the first reading ordinances, with no individuals requesting to speak.

ORD C36280 Updating the duties, and responsibilities, for the Spokane Human Rights Commission; amending section 04.10.040 of the Spokane Municipal Code. (Council Sponsors: Council Members Stratton and Zappone)

There were no **Special Considerations.**

There were no **Hearings.**

OPEN FORUM

The following individual(s) spoke during Open Forum:

- Kim Schmidt
- Antone Velone
- William Hulings
- Cherrie Barnett
- Justin Haller
- Christine Quinn
- Dave M.
- Matthew Buchannan
- Nolan Steiner

ADJOURNMENT
There being no further business to come before the City Council, the Regular Legislative Session of the Spokane City Council adjourned at 7:58 p.m.

Minutes prepared and submitted for publication in the October 5, 2022, issue of the *Official Gazette*.

_____
Terri Pfister
Spokane City Clerk

Approved by Spokane City Council on October 10, 2022.

_____
Breean Beggs
City Council President

MEETING MINUTES
City of Spokane
City Council Study Session
October 6, 2022

Call to Order: 11:07 a.m.

Recording of the meeting may be viewed here at https://vimeo.com/spokanecitycouncil.

Direct link: https://vimeo.com/757723843

Attendance:

Committee Members Present: Council President Breean Beggs, Council Members Kinnear, Stratton, Cathcart, Wilkerson, and Bingle

Committee Members Absent: Council Member Zappone

Agenda Items:

1. Budget – Utility Delinquencies
   - Presenters:
     Marlene Feist, City of Spokane Public Works Division Director
   - Action taken:
     No action taken. Presentation and discussion only.

2. Budget – Parking System Recovery Plan
   - Presenters:
     Luis Garcia, City of Spokane Director of Parking Services and Code Enforcement
   - Action taken:
     No action taken. Presentation and discussion only.

3. 2021/2022 Comprehensive Plan Amendments
   - Presenters:
     Kevin Freibott, City of Spokane Planning; KayCee Downey, City of Spokane Planning; Colin Quinn-Hurst, City of Spokane Planning; Inga Note; City of Spokane Planning
   - Action taken:
     No action taken. Presentation and discussion only.

Executive Session: None

Adjournment:
The meeting adjourned at 12:28 p.m.

Minutes prepared and submitted for publication in the October 12, 2022, issue of the Official Gazette.

_____
Hannahlee Allers
Council Office Director

Approved by City Council on October 10, 2022.

_____
Breean Beggs
City Council President

Attest:

_____
Terri L. Pfister
City Clerk

Agenda Sheet for City Council Meeting of: 09/26/2022		**Date Rec'd**	9/13/2022
		Clerk's File #	ORD C36277
		Renews #	
Submitting Dept	POLICE	**Cross Ref #**	
Contact Name/Phone	ERIC OLSEN 835-4505	**Project #**	
Contact E-Mail	EOLSEN@SPOKANEPOLICE.ORG	**Bid #**	
Agenda Item Type	Special Budget Ordinance	**Requisition #**	
Agenda Item Name	0680-CLERK II & BUS. SYSTEMS ANALYST II FTE SBO		

Agenda Wording

Special Budget Ordinance for the creation of two new FTE's under the Spokane Police Department; a Clerk II and a Business Systems Analyst II.

Summary (Background)

A Clerk II position is being requested that will be assigned to the Downtown Precinct acting as a front desk receptionist. Estimated annual salary and benefits of $55,374. A Business Systems Analyst II position is being requested. This position will manage department IT projects including replacement of the police dispatch platform and accreditation of the digital forensics lab. Estimated annual salary and benefits of $81,43; partially funded by reimbursement from regional consortium.

Lease? NO Grant related? NO Public Works? NO

Fiscal Impact		**Budget Account**
Expense	**$** (14,909)	**#** 0680-30210-21150-00390
Expense	**$** 14,909	**#** 0680-11150-21250-00020
Expense	**$** 21,924	**#** 0680-11470-21140-01610
Select	**$**	**#**

Approvals		**Council Notifications**	
Dept Head	MEIDL, CRAIG	**Study Session\Other**	UE 9/12
Division Director	MEIDL, CRAIG	**Council Sponsor**	Cathcart/Bingle
Finance	SCHMITT, KEVIN	**Distribution List**	
Legal	PICCOLO, MIKE	spdfinance	
For the Mayor	ORMSBY, MICHAEL	eolsen	
Additional Approvals		dsingley	
Purchasing		sernst	
MANAGEMENT & BUDGET	STRATTON, JESSICA		

ORDINANCE NO C36277

An ordinance amending Ordinance No. C-36161, passed by the City Council December 13, 2021, and entitled, “An ordinance adopting the Annual Budget of the City of Spokane for 2022, making appropriations to the various funds of the City of Spokane government for the fiscal year ending December 31, 2022, and providing it shall take effect immediately upon passage,” and declaring an emergency.

WHEREAS, subsequent to the adoption of the 2022 budget Ordinance No. C-36161, as above entitled, and which passed the City Council December 13, 2021, it is necessary to make changes in the appropriations of the General fund, which changes could not have been anticipated or known at the time of making such budget ordinance; and

WHEREAS, this ordinance has been on file in the City Clerk’s Office for five days; - Now, Therefore,

The City of Spokane does ordain:

Section 1. That in the budget of the General Fund, and the budget annexed thereto with reference to the General Fund, the following changes be made:

1) Add one classified Clerk II position (from 2 to 3) and increase the associated appropriation for salary and benefits in the Police department by $14,909.
2) Decrease the appropriation for a Program Professional position in the Police department by $14,909.

A) There is no change to the overall appropriation level in the General Fund.

1) Add one classified Business Analyst II position (from 0 to 1) and increase the associated appropriation for salary and benefits in the Police department by $21,924.

B) This is an increase to the overall appropriation level in the General Fund.

Section 2. It is, therefore, by the City Council declared that an urgency and emergency exists for making the changes set forth herein, such urgency and emergency arising from the need to increase staffing at the downtown precinct and in Police IT, and because of such need, an urgency and emergency exists for the passage of this ordinance, and also, because the same makes an appropriation, it shall take effect and be in force immediately upon its passage.

Passed the City Council _____

_____

Council President

Attest:_____

City Clerk

Approved as to form:_____

Assistant City Attorney

_____ _____

Mayor Date

_____

Effective Date

Committee Agenda Sheet
Public Safety & Community Health

Submitting Department	Spokane Police Department
Contact Name & Phone	Eric Olsen
Contact Email	eolsen@spokanepolice.org
Council Sponsor(s)	Councilmembers Cathcart/Bingle
Select Agenda Item Type	■ Consent ☐ Discussion Time Requested: _____
Agenda Item Name	SBO to add 2 new FTE's to the Spokane Police Department
Summary (Background)	SPD is requesting the addition of 2 new FTEs and budget appropriation for 2022 to better assist the department and the community. 1. Clerk II for the Downtown Precinct a. This position would be assigned to work the front desk, freeing up an NRO to field work Monday-Friday b. Act as receptionist for the Downtown Precinct. c. Waits on the counter, and answers telephones, giving and receiving information. Refers complaints pertaining to departmental policies and regulations to the appropriate person. d. Copies data, compiles records and reports, and tabulates and posts data in record books. e. Estimated annual salary/benefits of $55,374 2. Business Systems Analyst II a. The TARU group has an immense workload including managing upwards of 30 projects in addition to day-to-day operations. b. Upcoming projects include replacing New World, CAD replacement, accreditation of the digital forensic lab, etc. c. Addition of a Business System Analyst II would make sure that major projects are aligned with business needs d. Currently utilizing out of grade pay to staff this position 2 days per week e. Estimated annual salary/benefits of $81,432
Proposed Council Action & Date:	Approval of SBO for 2 FTE's and $40,000 in appropriation funded from General Fund Reserves for 2022. The positions will be considered as part of the 2023 budget process. SPD requests approval September 19th , 2022.

Fiscal Impact:
Total Cost: Approximately $40,000 in 2022
Approved in current year budget? ☐ Yes ■ No ☐ N/A

Funding Source ☐ One-time ■ Recurring
Specify funding source: One-time General Fund Reserves

Expense Occurrence ☐ One-time ■ Recurring
This will require consideration for recurring funding in the 2023 budget.
Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts

What impacts would the proposal have on historically excluded communities?

How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities? N/A
How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution? Work product statistics will be kept on position #1, and position #2 actually works to resolves severe problems already identified.
Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others? Position #1 will enable more efficient use of police officers and be more readily available to the public, enhancing our citizens living experience. Position #2 will enable SPD officers and detectives work more efficiently and effectivcely, thus allowing for offering better service to our citizens.

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	9/28/2022
		Clerk's File #	ORD C36290
		Renews #	
Submitting Dept	SOLID WASTE DISPOSAL	Cross Ref #	
Contact Name/Phone	CHRIS AVERYT 625-6540	Project #	
Contact E-Mail	CAVERYT@SPOKANECITY.ORG	Bid #	
Agenda Item Type	Special Budget Ordinance	Requisition #	SBO
Agenda Item Name	4490 SBO FOR 2023 CAPITAL PURCHASE OF AN AIR DRYER SYSTEM		

Agenda Wording

This SBO request is for $172,300.00 to go towards the purchase of an air dryer system for the Waste to Energy Facility which is in the 2023 capital plan.

Summary (Background)

The WTE had planned to purchase and install a new air dryer system for the facility in the 2023 Capital Plan. The lead time for delivery of this type of system is estimated to be 6 months. In order to procure and install this air dryer in 2023 as planned, it will need to be ordered in 2022. This purchase provides a cost savings of approximately $100,000 annually as the facility rents a compressor during outages due to capacity constraints. This purchase eliminates the need for a rental.

Lease? NO Grant related? NO Public Works? NO

Fiscal Impact		Budget Account
Expense	$ 172,300.00	# 4490-44900-94000-56401-99999
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	AVERYT, CHRIS	Study Session\Other	PIES 9/26
Division Director	FEIST, MARLENE	Council Sponsor	CM Kinnear, CM Wilkerson
Finance	ALBIN-MOORE, ANGELA	Distribution List	
Legal	PICCOLO, MIKE	mdorgan@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	jsalstrom@spokanecity.org	
Additional Approvals		tprince@spokanecity.org	
Purchasing		caveryt@spokanecity.org	
MANAGEMENT & BUDGET	STRATTON, JESSICA		

Committee Agenda Sheet
Public Infrastructure, Environment and Sustainability

Submitting Department	Solid Waste Disposal
Contact Name & Phone	Chris Averyt, 625-6540
Contact Email	caveryt@spokanecity.org
Council Sponsor(s)	CM Lori Kinnear
Select Agenda Item Type	■ Consent ☐ Discussion Time Requested: _____
Agenda Item Name	SBO-2023 Capital purchase of an air dryer system for the WTE
Summary (Background)	The Waste to Energy Facility had planned to purchase and install a new air dryer system for the facility in the 2023 Capital Plan. The lead time for delivery of this type of system is estimated to be 6 months. In order to procure and install this air dryer in 2023 as planned, it will need to be ordered in 2022. The completion of this project provides a cost savings of approximately $100,000 annually as the facility rents a compressor during outages due to capacity constraints. This purchase eliminates the need for the rental compressor and the associated fuel to run it. The SBO request is for $172,300.00 which will be funded from the Solid Waste Fund reserves.
Proposed Council Action & Date:	Approval on Sept. 26, 2022.

Fiscal Impact:
Total Cost: $172,300
Approved in current year budget? ☐ Yes ■ No ☐ N/A

Funding Source ■ One-time ☐ Recurring
Specify funding source: Solid Waste Fund-2023 SWD Budget

Expense Occurrence ■ One-time ☐ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts

What impacts would the proposal have on historically excluded communities?

N/A

How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities?

N/A
How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?
Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others?

ORDINANCE NO C36290

An ordinance amending Ordinance No. C-36161, passed by the City Council December 13, 2021, and entitled, “An ordinance adopting the Annual Budget of the City of Spokane for 2022, making appropriations to the various funds of the City of Spokane government for the fiscal year ending December 31, 2022, and providing it shall take effect immediately upon passage,” and declaring an emergency.

WHEREAS, subsequent to the adoption of the 2022 budget Ordinance No. C-36161, as above entitled, and which passed the City Council December 13, 2021, it is necessary to make changes in the appropriations of the Solid Waste Fund, which changes could not have been anticipated or known at the time of making such budget ordinance; and

WHEREAS, this ordinance has been on file in the City Clerk’s Office for five days; - Now, Therefore,

The City of Spokane does ordain:

Section 1. That in the budget of the Solid Waste Fund, and the budget annexed thereto with reference to the Fund, the following changes be made:

1) Increase appropriation by $172,300.
2) The increase in appropriation is provided solely for the purchase and installation of a new air dryer which shall be funded from unappropriated fund balance.

(A) This is an increase to the overall appropriation level in the Solid Waste Fund.

Section 2. It is, therefore, by the City Council declared that an urgency and emergency exists for making the changes set forth herein, such urgency and emergency arising from the need to mitigate months-long lead times, and because of such need, an urgency and emergency exists for the passage of this ordinance, and also, because the same makes an appropriation, it shall take effect and be in force immediately upon its passage.

Passed the City Council _____

_____
Council President

Attest:_____
City Clerk

Approved as to form:_____
Assistant City Attorney

_____ _____
Mayor Date

_____
Effective Date

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	9/28/2022
		Clerk's File #	ORD C36291
		Renews #	
Submitting Dept	SOLID WASTE DISPOSAL	Cross Ref #	
Contact Name/Phone	CHRIS AVERYT 625-6540	Project #	
Contact E-Mail	CAVERYT@SPOKANECITY.ORG	Bid #	
Agenda Item Type	Special Budget Ordinance	Requisition #	SBO
Agenda Item Name	4490 SBO FOR EMERGENCY TIPPING FLOOR REPAIRS		

Agenda Wording

This SBO request is for $827,310.00 for the emergency repair of the tipping floor at the Waste to Energy Facility.

Summary (Background)

The Waste to Energy Facility recently discovered substantial damage to the structural components of a section of the tipping floor in bay 6, rendering it inaccessible. This area of the floor also serves as a roof and one wall of the warehouse, which has also been rendered inaccessible now. An emergency justification has been done to get this fixed as soon as possible as it severely impacts operations.

Lease? NO Grant related? NO Public Works? YES

Fiscal Impact		Budget Account
Expense	$ $827,310.00	# 4490-44100-37148-54802-34002
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	AVERYT, CHRIS	Study Session\Other	PIES 9/26
Division Director	FEIST, MARLENE	Council Sponsor	CM Kinnear, CM Wilkerson
Finance	ALBIN-MOORE, ANGELA	Distribution List	
Legal	PICCOLO, MIKE	mdorgan@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	jsalstrom@spokanecity.org	
Additional Approvals		tprince@spokanecity.org	
Purchasing		caveryt@spokanecity.org	
MANAGEMENT & BUDGET	STRATTON, JESSICA	jsalstrom@spokanecity.org	

Committee Agenda Sheet
Public Infrastructure, Environment and Sustainability

Submitting Department	Solid Waste Disposal
Contact Name & Phone	Chris Averyt, 625-6540
Contact Email	caveryt@spokanecity.org
Council Sponsor(s)	CM Lori Kinnear
Select Agenda Item Type	■ Consent ☐ Discussion Time Requested: _____
Agenda Item Name	SBO-Emergency Tipping Floor Repairs
Summary (Background)	The Waste to Energy Facility recently discovered substantial damage to the structural components of a section of the tipping floor in bay 6, rendering it inaccessible. This area of the floor also serves as a roof and one wall of the warehouse, which has also been rendered inaccessible now. An emergency justification has been done to get this fixed as soon as possible as it severely impacts operations. The SBO request is for $827,310.00, which includes the estimated cost of the project at $660,000, plus tax and a 15% contingency reserve. Funds from the Solid Waste Fund reserves will be utilized for this.
Proposed Council Action & Date:	Approval on Sept. 26, 2022.

Fiscal Impact:
Total Cost: $827,310
Approved in current year budget? ☐ Yes ■ No ☐ N/A

Funding Source ■ One-time ☐ Recurring
Specify funding source: Solid Waste Fund Reserves

Expense Occurrence ■ One-time ☐ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts

What impacts would the proposal have on historically excluded communities?

N/A

How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities? N/A
How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?
Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others?

ORDINANCE NO C36291

An ordinance amending Ordinance No. C-36161, passed by the City Council December 13, 2021, and entitled, “An ordinance adopting the Annual Budget of the City of Spokane for 2022, making appropriations to the various funds of the City of Spokane government for the fiscal year ending December 31, 2022, and providing it shall take effect immediately upon passage,” and declaring an emergency.

WHEREAS, subsequent to the adoption of the 2022 budget Ordinance No. C-36161, as above entitled, and which passed the City Council December 13, 2021, it is necessary to make changes in the appropriations of the Solid Waste Fund, which changes could not have been anticipated or known at the time of making such budget ordinance; and

WHEREAS, this ordinance has been on file in the City Clerk’s Office for five days; - Now, Therefore,

The City of Spokane does ordain:

Section 1. That in the budget of the Solid Waste Fund, and the budget annexed thereto with reference to the Fund, the following changes be made:

1) Increase appropriation by $827,310.
2) The increase in appropriation is provided solely for repairs to the tipping floor which shall be funded from unappropriated fund balance.

(A) This is an increase to the overall appropriation level in the Solid Waste Fund.

Section 2. It is, therefore, by the City Council declared that an urgency and emergency exists for making the changes set forth herein, such urgency and emergency arising from the need to repair substantial damage to the WTE tipping floor, and because of such need, an urgency and emergency exists for the passage of this ordinance, and also, because the same makes an appropriation, it shall take effect and be in force immediately upon its passage.

Passed the City Council _____

_____
Council President

Attest:_____
City Clerk

Approved as to form:_____
Assistant City Attorney

_____ _____
Mayor Date

_____
Effective Date

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	9/28/2022
		Clerk's File #	ORD C36292
		Renews #	
Submitting Dept	SOLID WASTE DISPOSAL	Cross Ref #	
Contact Name/Phone	CHRIS AVERYT 625-6540	Project #	
Contact E-Mail	CAVERYT@SPOKANECITY.ORG	Bid #	
Agenda Item Type	Special Budget Ordinance	Requisition #	SBO
Agenda Item Name	4490 SBO FOR THE PURCHASE OF LONG LEAD TIME PARTS FOR 2023		

Agenda Wording

This SBO request is for $1,100,000.00 to go towards the purchase of the required boiler tubing and grate parts needed for outages in 2023.

Summary (Background)

Due to supply chain issues, lead times for parts and supplies needed for maintenance and repairs at the WTE have increased exponentially. In 2023, the generator bank and superheater tubes are scheduled for replacement. To have this tubing on site in time for the work to be done as scheduled, it will need to be ordered in 2022. There are also grate parts needed for the 2023 outages that also have a very long lead time. Parts that were ordered in the latter part of 2021 are only just now arriving.

Lease? NO Grant related? NO Public Works? NO

Fiscal Impact		Budget Account
Expense	$ 1,100.000.00	# 4490-44900-37145-54803-99999
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	AVERYT, CHRIS	Study Session\Other	PIES 9/26
Division Director	FEIST, MARLENE	Council Sponsor	CM Kinnear, CM Wilkerson
Finance	ALBIN-MOORE, ANGELA	Distribution List	
Legal	PICCOLO, MIKE	mdorgan@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	jsalstrom@spokanecity.org	
Additional Approvals		tprince@spokanecity.org	
Purchasing		caveryt@spokanecity.org	
MANAGEMENT & BUDGET	STRATTON, JESSICA		

Committee Agenda Sheet
Public Infrastructure, Environment and Sustainability

Submitting Department	Solid Waste Disposal
Contact Name & Phone	Chris Averyt, 625-6540
Contact Email	caveryt@spokanecity.org
Council Sponsor(s)	CM Lori Kinnear
Select Agenda Item Type	■ Consent ☐ Discussion Time Requested: _____
Agenda Item Name	SBO-Purchase of long lead time parts for 2023
Summary (Background)	Due to supply chain issues globally, lead times for parts and supplies needed for maintenance and repairs at the Waste to Energy Facility have increased exponentially. In 2023, the generator bank and superheater tubes are scheduled for replacement. To have this special tubing on site in time for the work to be done as scheduled, it will need to be ordered in 2022. There are also grate parts that will be needed for the 2023 outages that also have a very long lead time. Parts that were ordered in the latter part of 2021 are only just now arriving. The total SBO request is for $1,100,000 to cover the required tubing and grate parts and will be funded from the Solid Waste Fund reserves.
Proposed Council Action & Date:	Approval on Sept. 26, 2022

Fiscal Impact:
Total Cost: $1,100,000.00
Approved in current year budget? ☐ Yes ■ No ☐ N/A

Funding Source ■ One-time ☐ Recurring
Specify funding source: 2022 SWD Budget

Expense Occurrence ■ One-time ☐ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts
What impacts would the proposal have on historically excluded communities? N/A
How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities? N/A
How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?
Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others?

ORDINANCE NO C36292

An ordinance amending Ordinance No. C-36161, passed by the City Council December 13, 2021, and entitled, “An ordinance adopting the Annual Budget of the City of Spokane for 2022, making appropriations to the various funds of the City of Spokane government for the fiscal year ending December 31, 2022, and providing it shall take effect immediately upon passage,” and declaring an emergency.

WHEREAS, subsequent to the adoption of the 2022 budget Ordinance No. C-36161, as above entitled, and which passed the City Council December 13, 2021, it is necessary to make changes in the appropriations of the Solid Waste Fund, which changes could not have been anticipated or known at the time of making such budget ordinance; and

WHEREAS, this ordinance has been on file in the City Clerk’s Office for five days; - Now, Therefore,

The City of Spokane does ordain:

Section 1. That in the budget of the Solid Waste Fund, and the budget annexed thereto with reference to the Fund, the following changes be made:

1) Increase appropriation by $1,100,000.
2) The increase in appropriation is provided solely for the purchase of parts and supplies which shall be funded from unappropriated fund balance.

(A) This is an increase to the overall appropriation level in the Solid Waste Fund.

Section 2. It is, therefore, by the City Council declared that an urgency and emergency exists for making the changes set forth herein, such urgency and emergency arising from the need to mitigate months-long lead times, and because of such need, an urgency and emergency exists for the passage of this ordinance, and also, because the same makes an appropriation, it shall take effect and be in force immediately upon its passage.

Passed the City Council _____

_____
Council President

Attest:_____
City Clerk

Approved as to form:_____
Assistant City Attorney

_____ _____
Mayor Date

_____
Effective Date

Agenda Sheet for City Council Meeting of: 10/10/2022		Date Rec'd	9/28/2022
		Clerk's File #	ORD C36293
		Renews #	
Submitting Dept	SOLID WASTE DISPOSAL	Cross Ref #	
Contact Name/Phone	CHRIS AVERYT 625-6540	Project #	
Contact E-Mail	CAVERYT@SPOKANECITY.ORG	Bid #	
Agenda Item Type	Special Budget Ordinance	Requisition #	SBO
Agenda Item Name	4490 SBO FOR RATE AND TONNAGE INCREASES		

Agenda Wording

This SBO request is for $500,000.00 and is to go towards the additional costs associated with ash and non-processable waste disposal services.

Summary (Background)

The City utilizes Regional Disposal Company (RDC) for transportation and disposal services for ash, bypass and non-processable waste at RDC's landfill in Klickitat County, WA. Due to a 6.4% increase in tonnage being hauled as a result of additional municipal solid waste receipts, additional funding is needed to fund this service through the end of 2022.

Lease? NO Grant related? NO Public Works? NO

Fiscal Impact		Budget Account
Expense	$ 500,000.00	# 4490-44100-37148-54201-99999
Select	$	#
Select	$	#
Select	$	#

Approvals		Council Notifications	
Dept Head	AVERYT, CHRIS	Study Session\Other	PIES 9/26
Division Director	FEIST, MARLENE	Council Sponsor	CM Kinnear, CM Wilkerson
Finance	ALBIN-MOORE, ANGELA	Distribution List	
Legal	PICCOLO, MIKE	mdorgan@spokanecity.org	
For the Mayor	PERKINS, JOHNNIE	jsalstrom@spokanecity.org	
Additional Approvals		tprince@spokanecity.org	
Purchasing		caveryt@spokanecity.org	
MANAGEMENT & BUDGET	STRATTON, JESSICA		

Committee Agenda Sheet
Public Infrastructure, Environment and Sustainability

Submitting Department	Solid Waste Disposal
Contact Name & Phone	Chris Averyt, 625-6540
Contact Email	dpaine@spokanecity.org
Council Sponsor(s)	CM Lori Kinnear
Select Agenda Item Type	■ Consent ☐ Discussion Time Requested: _____
Agenda Item Name	SBO-Tonnage and Rate Increases
Summary (Background)	The City utilizes Regional Disposal Company (RDC) for transportation and disposal services for ash, bypass and non-processible waste at RDC's landfill in Klickitat County, WA. Due to a 6.4% increase in tonnage being hauled as a result of additional MSW receipts, additional funding is needed to fund this service through the end of 2022. Based on tonnage estimates through the end of the year, the SBO request is for $500,000 and will utilize Solid Waste Fund reserves.
Proposed Council Action & Date:	Approval on Sept. 26, 2022.

Fiscal Impact:
Total Cost: $500,000.00
Approved in current year budget? ■ Yes ☐ No ☐ N/A

Funding Source ■ One-time ☐ Recurring
Specify funding source: Solid Waste Fund reserves

Expense Occurrence ☐ One-time ■ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)
Operations Impacts
What impacts would the proposal have on historically excluded communities? N/A
How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities? N/A
How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?
Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others?

ORDINANCE NO C36293

An ordinance amending Ordinance No. C-36161, passed by the City Council December 13, 2021, and entitled, “An ordinance adopting the Annual Budget of the City of Spokane for 2022, making appropriations to the various funds of the City of Spokane government for the fiscal year ending December 31, 2022, and providing it shall take effect immediately upon passage,” and declaring an emergency.

WHEREAS, subsequent to the adoption of the 2022 budget Ordinance No. C-36161, as above entitled, and which passed the City Council December 13, 2021, it is necessary to make changes in the appropriations of the Solid Waste Fund, which changes could not have been anticipated or known at the time of making such budget ordinance; and

WHEREAS, this ordinance has been on file in the City Clerk’s Office for five days; - Now, Therefore,

The City of Spokane does ordain:

Section 1. That in the budget of the Solid Waste Fund, and the budget annexed thereto with reference to the Fund, the following changes be made:

1) Increase appropriation by $500,000.
2) The increase in appropriation is provided solely for transportation and disposal services which shall be funded from unappropriated fund balance.

(A) This is an increase to the overall appropriation level in the Solid Waste Fund.

Section 2. It is, therefore, by the City Council declared that an urgency and emergency exists for making the changes set forth herein, such urgency and emergency arising from the need to meet tonnage estimates through the end of the year, and because of such need, an urgency and emergency exists for the passage of this ordinance, and also, because the same makes an appropriation, it shall take effect and be in force immediately upon its passage.

Passed the City Council _____

_____
Council President

Attest:_____
City Clerk

Approved as to form:_____
Assistant City Attorney

_____ _____
Mayor Date

_____
Effective Date

Agenda Sheet for City Council Meeting of: 10/10/2022		**Date Rec'd**	9/21/2022
		Clerk's File #	RES 2022-0090
		Renews #	
Submitting Dept	PARKS - OPERATIONS	**Cross Ref #**	
Contact Name/Phone	NICK HAMAD 509-363-5452	**Project #**	
Contact E-Mail	NHAMAD@SPOKANECITY.ORG	**Bid #**	
Agenda Item Type	Resolutions	**Requisition #**	
Agenda Item Name	1400 RESOLUTION ADOPTING THE PARKS DIVISION 2022 PARKS AND NATURAL LANDS M		

Agenda Wording

Approve resolution adopting the 2022 Parks and Natural Lands Master Plan

Summary (Background)

Request City Council adopt by resolution the '2022 Parks and Natural Lands Master Plan', a strategic system-wide park planning document recently completed by the City Parks Division.

Lease? NO Grant related? NO Public Works? NO

Fiscal Impact		**Budget Account**
Neutral	**$**	**#**
Select	**$**	**#**
Select	**$**	**#**
Select	**$**	**#**

Approvals		**Council Notifications**	
Dept Head	VORDERBRUEGGEN, AL	**Study Session\Other**	Urban Experience Committee
Division Director	JONES, GARRETT	**Council Sponsor**	CM Stratton & CM Zappone
Finance	ORLOB, KIMBERLY	**Distribution List**	
Legal	RICHMAN, JAMES	nhamad@spokanecity.org	
For the Mayor	KIRK, JESSICA		
Additional Approvals			
Purchasing			

Urban Experience Committee Agenda Sheet

Submitting Department	Parks and Recreation
Contact Name & Phone	Nick Hmad – 509-363-5452
Contact Email	nhamad@spokanecity.org
Council Sponsor(s)	Councilmembers Karen Stratton and Zack Zappone
Select Agenda Item Type	☐ Consent ☒ Discussion Time Requested: 10 minutes
Agenda Item Name	Resolution adopting the Parks Division 2022 Parks and Natural Lands Master Plan
Summary (Background)	Request City Council adopt by resolution the '2022 Parks and Natural Lands Master Plan', a strategic system-wide park planning document recently completed by the City Parks Division. The plan is the most recent update to the City's parks and open space master plan (last updated in 2010), and was developed through numerous thorough technical analyses and through extensive public outreach. The plan establishes themes, goals objectives and strategies for improving the City Parks system over the next 10+ years. Additionally, the plan provides a framework for prioritizing city park investment decisions and established high priority capital, operations, and policy actions for immediate and near term implementation. The Park Board adopted this plan by resolution in June of 2022.
Proposed Council Action & Date:	Approve resolution adopting the 2022 Parks and Natural Lands Master Plan

Fiscal Impact:

Total Cost: Budget neutral

Approved in current year budget? ☐ Yes ☐ No ☒ N/A

Funding Source ☐ One-time ☐ Recurring

Specify funding source:

Expense Occurrence ☐ One-time ☐ Recurring

Other budget impacts: (revenue generating, match requirements, etc.)

Operations Impacts

What impacts would the proposal have on historically excluded communities?

Technical analyses included in this project have identified social and environmental park equity zones', 'geographically underserved park service areas', and 'park investment history' maps. These maps, combined with additional data, can be used to determine the highest priority for park investment to uplift historically excluded or underinvested communities within the City.

How will data be collected, analyzed, and reported concerning the effect of the program/policy by racial, ethnic, gender identity, national origin, income level, disability, sexual orientation, or other existing disparities?
N/A

How will data be collected regarding the effectiveness of this program, policy or product to ensure it is the right solution?
N/A

Describe how this proposal aligns with current City Policies, including the Comprehensive Plan, Sustainability Action Plan, Capital Improvement Program, Neighborhood Master Plans, Council Resolutions, and others?

This document provides detailed information regarding current and proposed service levels for community park service. This information provides meaningful background for future Comprehensive Plan updates. This also provides detailed information regarding the type, size and location of future park investments throughout the city.

RESOLUTION NO. 2022-_____

A resolution adopting the 2022 Parks and Natural Lands Master Plan.

WHEREAS, the City of Spokane owns and operates 3,900+ acres of parks & natural lands within and outside of the City of Spokane; and

WHEREAS, the City, through its Park Board, lays out, establishes, procures, purchases, accepts, and manages controls and improvements of all parks and grounds used for park purposes, all boulevards and parkways, and connecting parks and structures thereon located both within and outside of the City of Spokane; and

WHEREAS, the City of Spokane has an extensive history in park system planning, commissioning the City's first park plan in 1913; and

WHEREAS, the City, through its Park Board, has regularly and strategically planned this system of parks and natural lands for the benefit of the public since that time; and

WHEREAS, the last adopted park master plan was completed in 2014 for the Riverfront Park Redevelopment; and

WHEREAS, to remain eligible for State and Federal grants, the City is required to develop and/or update and adopt a long-range "parks, recreation and open space plan" a minimum of every 6 calendar years; and

WHEREAS, with the substantial completion of the Riverfront Park Bond improvements, timing is suitable to conduct a new system-wide park master plan; and

WHEREAS, the City desired that the current master plan be based primarily on Spokane City resident's park needs and desires through direct community outreach; and

WHEREAS, since the beginning of 2021, the public has provided substantial input and direction through the master planning process during over 26 individual opportunities, including a series of topical focus groups, pop-up events in parks, an open online survey, a statistically valid survey, virtual workshops, an open online mapping activity, direct outreach to under-represented groups through ambassadors, and youth outreach through Spokane Public Schools; and

WHEREAS, in addition to public input, the master planning process for the system-wide parks and natural lands master plan also included extensive deliberations among Park Board members, a Project Advisory Committee, city park, engineering, and planning staff, and numerous technical and professional consultants culminating in the 2022 Parks and Natural Lands Master Plan; and

WHEREAS, the resulting 2022 Parks and Natural Lands Master Plan, compiled by Park Department staff and project consultants, is the direct result of input and recommendations from Spokane City residents, the Project Advisory Committee, the Park Board, and city staff; and

WHEREAS, city staff, project consultants, and project advisory committee substantially concluded planning work in May 2022; and

WHEREAS, the Park Board adopted the Parks and Natural Lands Master Plan by resolution in June 2022; and

WHEREAS, to ensure the proposed plan recommendations remain sustainable and relevant, the City recognizes that the 2022 Parks and Natural Lands Master Plan is a living document, and that ongoing changes additions and edits will be made to the plan using 'prioritization matrix' framework included in the plan; and

WHEREAS, as identified, needed changes or additions will require approval by the Park Board; and

WHEREAS, adoption of the 2022 Parks and Natural Lands Master Plan does not specifically identify policy, budget or other final decisions regarding capital improvements related to a public bond proposal, all such decisions being reserved to the Park Board under the Spokane City Charter.

NOW, THEREFORE, BE IT RESOLVED that the Spokane City Council adopts the attached 2022 Parks and Natural Lands Master Plan.

BE IT ALSO RESOLVED that the City Council will coordinate with the Park Board and park staff as needed to monitor the plan for future potential updates and support implementation of plan recommendations.

Passed by the City Council this ____ day of _____, 2022.

_____
City Clerk

Approved as to form:

_____
Assistant City Attorney

AGENDA SHEET FOR PARK BOARD MEETING OF: June 9, 2022

Submitting Division	Contact Person	Phone No.
Parks & Recreation	Nick Hamad	363-5452

Department: ☐ Finance ☑ Operations ☐ Recreation/Golf ☐ Riverfront Park

Committee: ☐ Finance ☐ Golf ☑ Land ☐ Recreation ☐ Riverfront ☐ UFTC

Type of contract: ☑ New ☐ Renewal ☐ Amendment ☐ Extension ☐ Other

Beginning date: 06/09/2022 Expiration date: _____ Open ended ☑

CLERKS' FILE	
RENEWAL	
CROSS REF	
ENG	
BID	
REQUISITION	

AGENDA WORDING:

City of Spokane Parks and Natural Lands Master Plan Adoption (no cost)

BACKGROUND:

In fall 2019, Spokane Parks retained Design Workshop to update the city's parks and open spaces master plan. In Spring 2020, the project was put on hold due to Covid-19. In spring 2021, the project re-started and has been ongoing since that time. Since spring 2021, the master plan has been created using various technical analyses and assessment and including feedback from an extensive 2021 public outreach campaign which engaged over 5,300 residents through 26+ public engagement opportunities. The plan has evaluated the city parks systems and established four themes (land, water, people and legacy), 13 goals and recommended dozens of strategies to improve the City Parks system over the next 10+ years. The plan has also created a framework for prioritizing city park investment decisions and established high priority capital, operational, and policy action items for immediate and near term implementation.

RECOMMENDATION:

Motion to adopt The City of Spokane Parks and Recreation Parks and Natural Lands Master Plan

ATTACHMENTS: Include in packets. See back of Agenda Sheet for specific supporting document requirements.

SIGNATURES:

Nick Hamad
Requester - Nick Hamad

Dept. Manager _____

Garrett Jones
Director of Parks & Recreation – Garrett Jones

Megan Qureshi
Parks Accounting – Megan Qureshi

James Richman
Legal Dept. – James Richman

DISTRIBUTION:

Parks: Accounting
Parks: Pamela Clarke
Budget Manager:
Requester: Nick Hamad

Fianna Dickson
Garrett Jones
alaybourn@designworkshop.com

PARK BOARD ACTION: APPROVED BY SPOKANE PARK BOARD

Jennifer Ogden
Jennifer Ogden, president

June 9, 2022

Fiscal Impact	**Budget Account**
Expenditure:	
Budget neutral	
Revenue:	

☐ Existing vendor ☐ New vendor – If so, please include vendor packet ☐

Supporting documents:

☐ Quotes/Solicitation (RFP, RFQ, RFB)

☐ Contractor is on the City's A&E Roster City of Spokane

☐ Spokane Business registration expiration date: _____

UBI#: _____

☐ W-9 (for new contractors/consultants/vendors)

☐ ACH Forms (for new contractors/consultants/vendors)

☐ Insurance Certificate (minimum $1 million in General Liability)

Spokane Park Board
Briefing Paper

Committee	Land Committee
Committee meeting date	June 1, 2022
Requester	Nick Hamad **Phone number**: 509-363-5452
Type of agenda item	◯ Consent ◯ Discussion ◯ Information ◉ Action
Type of contract/agreement	◉ New ◯ Renewal/extension ◯ Amendment/change order ◯ Other
City Clerks file (OPR or policy #)	
Item title: (Use exact language noted on the agenda)	City of Spokane Parks and Natural Lands Master Plan Adoption (no cost)
Begin/end dates	Begins: 06/09/2022 Ends: ☑ Open ended

Background/history:
In fall 2019, Spokane Parks retained Design Workshop to update the city's parks and open spaces master plan. In Spring 2020, the project was put on hold due to Covid-19. In spring 2021, the project re-started and has been ongoing since that time. Since spring 2021, the master plan has been created using various technical analyses and assessment and including feedback from an extensive 2021 public outreach campaign which engaged over 5,300 residents through 26+ public engagement opportunities.

The plan has evaluated the city parks systems and established four themes (land, water, people and legacy), 13 goals and recommended dozens of strategies to improve the City Parks system over the next 10+ years.

The plan has also created a framework for prioritizing city park investment decisions and established high priority capital, operational, and policy action items for immediate and near term implementation.

Motion wording:
Motion to adopt The City of Spokane Parks and Recreation Parks and Natural Lands Master Plan

Approvals/signatures outside Parks: ◯ Yes ◉ No
If so, who/what department, agency or company:
Name: Email address: Phone:

Distribution:
Parks – Accounting
Parks – Pamela Clarke
Requester: Nick Hamad
Grant Management Department/Name:
Anna Laybourn
Garrett Jones
Fianna Dickson

Fiscal impact: ◯ **Expenditure** ◉ **Revenue**
Amount: N/A
Budget code: N/A

Vendor: ◉ Existing vendor ◯ New vendor
Supporting documents:
☐ Quotes/solicitation (RFP, RFQ, RFB)
☐ Contractor is on the City's A&E Roster - City of Spokane
☐ UBI: Business license expiration date:
☐ W-9 (for new contractors/consultants/vendors
☐ ACH Forms (for new contractors/consultants/vendors
☐ Insurance Certificate (min. $1 million in General Liability)

Resolution #_____

CITY OF SPOKANE
PARK BOARD RESOLUTION

A RESOLUTION Adopting the 2022 Parks and Natural Lands Master Plan

WHEREAS, the City of Spokane owns and operates 3,900+ acres of parks & natural lands within and outside of the City of Spokane; and

WHEREAS, the Park Board is empowered by the City Charter with exclusive jurisdiction and control to lay out, establish, procure, purchase, accept, and have the care, management control and improvement of, all parks and grounds used for park purposes, all boulevards and parkways, and connecting parks and structures thereon located both within and outside of the City of Spokane; and

WHEREAS, the City of Spokane has an extensive history in park system planning, commissioning the City's first park plan in 1913; and

WHEREAS, the City Park Board has regularly and strategically planned this system of parks and natural lands for the benefit of the public since that time; and

WHEREAS, the last adopted park master plan was completed in 2014 for the Riverfront Park Redevelopment; and

WHEREAS, to remain eligible for State and Federal grants, the Park Board is required to develop and/or update and adopt a long-range 'parks, recreation and open space plan' a minimum of every 6 calendar years; and

WHEREAS, with the substantial completion of the Riverfront Park Bond improvements, timing is suitable to conduct a new system-wide park master plan; and

WHEREAS, the Park Board desired the current master plan be based primarily on Spokane City residents park needs and desires through direct community outreach; and

WHEREAS, since the beginning of 2021, the public has provided substantial input and direction through the master planning process during over 26 individual opportunities, including a series of topical focus groups, pop-up events in parks, an open online survey, a statistically valid survey, virtual workshops, an open online mapping activity, direct outreach to under-represented group through ambassadors, and youth outreach through Spokane Public Schools; and

WHEREAS, in addition to public input, the master planning process for the system-wide parks and natural lands master plan also included extensive deliberations among Park Board members, a Project Advisory Committee, city park, engineering, and planning staff, and numerous technical and professional consultants culminating in a "2022 Parks and Natural Lands Master Plan"; and

WHEREAS, the resulting 2022 Parks and Natural Lands Master Plan, compiled by Park Department staff and project consultants, is the direct result of input and recommendations from Spokane City residents, the Project Advisory Committee, Park Board, and city staff; and

WHEREAS, city staff, project consultants, and project advisory committee substantially concluded planning work in May 2022; and

WHEREAS, to ensure the proposed plan recommendations remain sustainable and relevant, the Park Board recognizes that the 2022 Parks and Natural Lands Master Plan is a living document, and that ongoing changes additions and edits will be made to the plan using 'prioritization matrix' framework included in the plan; and

WHEREAS, as identified, needed changes or additions will require approval by the Park Board; and

WHEREAS, adoption of the 2022 Parks and Natural Lands Master Plan does not specifically identify policy, budget or other final decisions regarding capital improvements related to a public bond proposal, all such decisions being reserved to the Park Board under the Spokane City Charter; and

NOW, THEREFORE,

BE IT RESOLVED by the Park Board to adopt the 2022 Parks and Natural Lands Master Plan; and

BE IT FURTHER RESOLVED that park staff shall monitor the plan for future potential updates and begin implementation of plan recommendations.

ADOPTED BY THE PARK BOARD ON _____

_____
Park Board President

Attest:

Approved as to form:

_____
City Clerk

_____
Assistant City Attorney