

August 2023

CPSC Staff Statement on: Organohalogen Flame Retardant (OFR) Literature Survey Guide and Evidence Map Files

The U.S. Consumer Product Safety Commission (CPSC or Commission) contracted with the University of Cincinnati (Contract No. CPSC-D-17-0001, Order No. 61320621F1001, Order No. 61320621F1002 and Order No. 61320621F1003) to develop a literature survey guide and generate evidence maps and other information for 14 organohalogen flame retardant (OFR) subclasses. This work provides data and other information supporting CPSC staff's development of scope documents for the 14 OFR subclasses.

The evidence maps summarize information from completed assessments, literature reviews, and chemistry, exposure, and toxicity databases based on CPSC staff's 2020 plan.¹ Staff's scope documents for each OFR subclass integrate the available information collected from literature surveys, and include exposure conceptual models, class-specific analysis plans that describe subsequent work for risk assessments.

This statement was prepared by the CPSC staff. University of Cincinnati personnel, in collaboration with CPSC staff, prepared the evidence maps and supporting files. This statement and associated documents have not been reviewed or approved by, and do not necessarily represent the views of, the Commission.

The literature survey guide provides information on how the evidence maps were developed. The guide will be posted to the OFR project page on the CPSC website to keep the public informed of the technical research related to the agency's regulatory activities.²

The citation for the guide is:

University of Cincinnati (UC). (2022). Literature Survey Guide: Draft 6. [Guide Draft 6 10.17.22_final.docx]. U.S. Consumer Product Safety Commission

Table 1 provides a list of the names and acronyms of the 14 OFR subclasses (subclasses are numbered only for convenience).

¹ CPSC Staff "Project Plan: Organohalogen Flame Retardant Chemicals Assessment," July 1, 2020. Available at: https://www.cpsc.gov/s3fs-public/OFR-plan-report-package-final.pdf.

² https://www.cpsc.gov/Business--Manufacturing/Organohalogen-Flame-Retardant-Chemicals-Assessment

#	OFR Subclass Abbreviation	OFR Subclass Name
1	PHOP	Polyhalogenated Organophosphates
2	PHBAF	Polyhalogenated Bisphenol Aliphatics
3	PHDE	Polyhalogenated Diphenyl Ethers
4	PHBA	Polyhalogenated Benzene Alicycles
5	PHBzAF	Polyhalogenated Benzene Aliphatics and Functionalized
6	PHPhAE	Polyhalogenated Phenol Aliphatic Ethers
7	PHA	Polyhalogenated Alicycles
8	PHPhD	Polyhalogenated Phenol Derivatives
9	PHACbx	Polyhalogenated Aliphatic Carboxylates
10	PHB	Polyhalogenated Benzenes
11	PHPBI	Polyhalogenated Phthalates/Benzoates/Imides
12	PHC	Polyhalogenated Carbocycles
13	PHT	Polyhalogenated Triazines
14	PHACh	Polyhalogenated Aliphatic Chains

Table 1: OFR Subclass Names and Abbreviations

Table 2 presents the list of the 56 final evidence map files (4 per subclass) that resulted from performance of the contracts (files are numbered only for convenience). These evidence map files will be posted to the OFR project page on the CPSC website and uploaded to the docket for CPSC's proceeding on this topic.³

Table 3 presents the list of the additional 84 supporting evidence map files (6 per subclass) that resulted from performance of the contracts (files are numbered only for convenience). These supporting files will be uploaded to the docket.

Table 2. Final Evidence Maps for Scoping Documents | Contract Files

#	Descriptive Name	File Name	Brief Description
1	PHOP Subclass Level 2 Literature Survey Evidence Map	PHOP Level 2 Evidence Maps 12.2.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
2	PHOP Subclass Level 3 Literature Survey Evidence Map	PHOP Level 3 Evidence Maps 12.2.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
3	PHOP Subclass Level 3B Literature Survey Evidence Map	PHOP Level 3B Evidence Maps 12.2.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.

³ Docket number CPSC-2015-0022, available at https://www.regulations.gov/docket/CPSC-2015-0022.

#	Descriptive Name	File Name	Brief Description
4	PHOP Subclass information downloaded from databases	PHOP tox individual database evidence maps - levels 2, 3, 3B- 12.2.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.
5	PHBAF Subclass Level 2 Literature Survey Evidence Map	PHBAF Level 2 Evidence Maps 12.2.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
6	PHBAF Subclass Level 3 Literature Survey Evidence Map	PHBAF Level 3 Evidence Maps 12.2.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
7	PHBAF Subclass Level 3B Literature Survey Evidence Map	PHBAF Level 3B Evidence Maps 12.2.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.
8	PHBAF Subclass information downloaded from databases	PHBAF tox individual database evidence maps - levels 2, 3, 3B	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.
9	PHDE Subclass Level 2 Literature Survey Evidence Map	PHDE Level 2 Evidence Maps 12.5.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
10	PHDE Subclass Level 3 Literature Survey Evidence Map	PHDE Level 3 Evidence Maps 12.5.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
11	PHDE Subclass Level 3B Literature Survey Evidence Map	PHDE Level 3B Evidence Maps 12.5.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.
12	PHDE Subclass information downloaded from databases	PHDE tox individual database evidence maps - levels 2, 3, 3B- 12.5.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.

#	Descriptive Name	File Name	Brief Description
13	PHBA Subclass Level 2 Literature Survey Evidence Map	PHBA Level 2 Evidence Maps 12.5.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
14	PHBA Subclass Level 3 Literature Survey Evidence Map	PHBA Level 3 Evidence Maps 12.5.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
15	PHBA Subclass Level 3B Literature Survey Evidence Map	PHBA Level 3B Evidence Maps 12.5.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.
16	PHBA Subclass information downloaded from databases	PHBA tox individual database evidence maps - levels 2, 3, 3B- 12.5.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.
17	PHBzAF Subclass Level 2 Literature Survey Evidence Map	PHBzAF Level 2 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
18	PHBzAF Subclass Level 3 Literature Survey Evidence Map	PHBzAF Level 3 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
19	PHBzAF Subclass Level 3B Literature Survey Evidence Map	PHBzAF Level 3B Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.
20	PHBzAF Subclass information downloaded from databases	PHBzAF tox individual database evidence maps - levels 2, 3, 3B- 12.6.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.
21	PHPhAE Subclass Level 2 Literature Survey Evidence Map	PHPhAE Level 2 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.

#	Descriptive Name	File Name	Brief Description
22	PHPhAE Subclass Level 3 Literature Survey Evidence Map	PHPhAE Level 3 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
23	PHPhAE Subclass Level 3B Literature Survey Evidence Map	PHPhAE Level 3B Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.
24	PHPhAE Subclass information downloaded from databases	PHPhAE tox individual database evidence maps - levels 2, 3, 3B- 12.6.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.
25	PHA Subclass Level 2 Literature Survey Evidence Map	PHA Level 2 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
26	PHA Subclass Level 3 Literature Survey Evidence Map	PHA Level 3 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
27	PHA Subclass Level 3B Literature Survey Evidence Map	PHA Level 3B Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.
28	PHA Subclass information downloaded from databases	PHA tox individual database evidence maps - levels 2, 3, 3B- 12.6.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.
29	PHPhD Subclass Level 2 Literature Survey Evidence Map	PHPhD Level 2 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
30	PHPhD Subclass Level 3 Literature Survey Evidence Map	PHPhD Level 3 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.

#	Descriptive Name	File Name	Brief Description
31	PHPhD Subclass Level 3B Literature Survey Evidence Map	PHPhD Level 3B Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.
32	PHPhD Subclass information downloaded from databases	PHPhD tox individual database evidence maps - levels 2, 3, 3B- 12.6.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.
33	PHACbx Subclass Level 2 Literature Survey Evidence Map	PHACbx Level 2 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
34	PHACbx Subclass Level 3 Literature Survey Evidence Map	PHACbx Level 3 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
35	PHACbx Subclass Level 3B Literature Survey Evidence Map	PHACbx Level 3B Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.
36	PHACbx Subclass information downloaded from databases	PHACbx tox individual database evidence maps - levels 2, 3, 3B- 12.6.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.
37	PHB Subclass Level 2 Literature Survey Evidence Map	PHB Level 2 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
38	PHB Subclass Level 3 Literature Survey Evidence Map	PHB Level 3 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
39	PHB Subclass Level 3B Literature Survey Evidence Map	PHB Level 3B Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.

#	Descriptive Name	File Name	Brief Description
40	PHB Subclass information downloaded from databases	PHB tox individual database evidence maps - levels 2, 3, 3B- 12.6.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature
41	PHPBI Subclass Level 2 Literature Survey Evidence Map	PHPBI Level 2 Evidence Maps 12.6.22.xlsx	Survey Guide. This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
42	PHPBI Subclass Level 3 Literature Survey Evidence Map	PHPBI Level 3 Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
43	PHPBI Subclass Level 3B Literature Survey Evidence Map	PHPBI Level 3B Evidence Maps 12.6.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.
44	PHPBI Subclass information downloaded from databases	PHPBI tox individual database evidence maps - levels 2, 3, 3B- 12.6.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.
45	PHC Subclass Level 2 Literature Survey Evidence Map	PHC Level 2 Evidence Maps 12.7.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
46	PHC Subclass Level 3 Literature Survey Evidence Map	PHC Level 3 Evidence Maps 12.7.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
47	PHC Subclass Level 3B Literature Survey Evidence Map	PHC Level 3B Evidence Maps 12.7.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.
48	PHC Subclass information downloaded from databases	PHC tox individual database evidence maps - levels 2, 3, 3B- 12.7.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.

#	Descriptive Name	File Name	Brief Description
49	PHT Subclass Level 2 Literature Survey Evidence Map	PHT Level 2 Evidence Maps 12.7.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
50	PHT Subclass Level 3 Literature Survey Evidence Map	PHT Level 3 Evidence Maps 12.7.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
51	PHT Subclass Level 3B Literature Survey Evidence Map	PHT Level 3B Evidence Maps 12.7.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.
52	PHT Subclass information downloaded from databases	PHT tox individual database evidence maps - levels 2, 3, 3B- 12.7.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.
53	PHACh Subclass Level 2 Literature Survey Evidence Map	PHACh Level 2 Evidence Maps 12.7.22.xlsx	This file describes the count of literature survey data sources that are tagged as containing toxicity, exposure, and/or risk information.
54	PHACh Subclass Level 3 Literature Survey Evidence Map	PHACh Level 3 Evidence Maps 12.7.22.xlsx	This file describes the count of literature survey data sources that contain specific types of toxicity, exposure, and risk information.
55	PHACh Subclass Level 3B Literature Survey Evidence Map	PHACh Level 3B Evidence Maps 12.7.22.xlsx	This file describes the count of literature survey data sources that contain even more specific types of toxicity, exposure, and risk information.
56	PHACh Subclass information downloaded from databases	PHACh tox individual database evidence maps - levels 2, 3, 3B- 12.7.22.xlsx	This file contains information downloaded and cleaned from individual databases described in the Literature Survey Guide.

Table 3. Final Supporting Files-Evidence Maps for Scoping Documents | ContractFiles

#	Descriptive Name	File Name	Brief Description
1	PHOP subclass detailed 3B extraction counts	PHOP PDF 3B Extraction Final 2.28.22.xlsx	3B extraction collects detailed toxicity, exposure, and/or risk information. The count of how often this detailed information occurs by chemical is presented in this file.
2	PHOP subclass selected studies for 3B extraction	PHOP 3B study selection.xlsx	This file describes the selected files for 3B extraction.
3	PHOP subclass information and heatmaps for Level 3B study selection	PHOP 3B study selection heatmaps_11.10.21.xlsx	This file describes how the data sources were selected for 3B extraction.
4	PHOP subclass power-query cleaning and visualizing of PDF data sources	PHOP PQ clean and viz 10.25.22.xlsx	This file describes how power queries were used to clean and visualize extracted data from PDF data sources (literature review or completed assessments).
5	PHOP subclass data from Multimedia Monitoring Database	PHOP MMDB Working.xlsx	This file counts the occurrence of records for different types of monitoring data by chemical.
6	PHOP subclass aggregated toxicity database counts	PHOP DB Tox Totals Working.xlsx	This file counts the occurrence of records for different types of toxicity data and aggregates these counts by chemical.
7	PHBAF subclass detailed 3B extraction counts	PHBAF PDF 3B Extraction Final 2.28.22.xlsx	3B extraction collects detailed toxicity, exposure, and/or risk information. The count of how often this detailed information occurs by chemical is presented in this file.
8	PHBAF subclass selected studies for 3B extraction	PHBAF 3B study selection clean.xlsx	This file describes the selected files for 3B extraction.
9	PHBAF subclass information and heatmaps for Level 3B study selection	PHBAF 3B study selection heatmaps_12.16.21.xlsx	This file describes how the data sources were selected for 3B extraction.
10	PHBAF subclass power-query cleaning	PHBAF PQ clean and viz_10.25.22.xlsx	This file describes how power queries were used to clean and visualize

#	Descriptive Name	File Name	Brief Description
	and visualizing of PDF		extracted data from PDF
	data sources		data sources (literature
			review or completed
			assessments).
11	PHBAF subclass data	PHBAF MMDB Working.xlsx	This file counts the
	from Multimedia		occurrence of records for
	Monitoring Database		different types of monitoring
			data by chemical.
12	PHBAF subclass	PHBAF DB Tox Totals Working.xlsx	This file counts the
	aggregated toxicity		occurrence of records for
	database counts		different types of toxicity
			data and aggregates these
40			counts by chemical.
13	PHDE subclass	PHDE 3B Extraction Final	3B extraction collects
	detailed 3B extraction	10.17.22.xlsx	detailed toxicity, exposure, and/or risk information. The
	counts		count of how often this
			detailed information occurs
			by chemical is presented in this file.
14	PHDE subclass	PHDE 3B Selection Sheets –	This file describes the
14	selected studies for	screened 3.30.22.xlsx	selected files for 3B
	3B extraction		extraction.
15	PHDE subclass	PHDE 3B Selection Heatmaps	This file describes how the
10	information and	3.28.22.xlsx	data sources were selected
	heatmaps for Level 3B	0.20.22.1.10.	for 3B extraction.
	study selection		
16	PHDE subclass	PHDEs PQ clean and viz.xlsx	This file describes how
	power-query cleaning		power queries were used to
	and visualizing of PDF		clean and visualize
	data sources		extracted data from PDF
			data sources (literature
			review or completed
			assessments).
17	PHDE subclass data	PHDE MMDB Working.xlsx	This file counts the
	from Multimedia		occurrence of records for
	Monitoring Database		different types of monitoring
			data by chemical.
18	PHDE subclass	PHDE DB Tox Totals Working.xlsx	This file counts the
	aggregated toxicity		occurrence of records for
	database counts		different types of toxicity
			data and aggregates these
			counts by chemical.
19	PHBA subclass	PHBAs PDF 3B Extraction Final	3B extraction collects
	detailed 3B extraction	10.14.22.xlsx	detailed toxicity, exposure,
	counts		and/or risk information. The
			count of how often this
			detailed information occurs
			by chemical is presented in this file.

#	Descriptive Name	File Name	Brief Description
20	PHBA subclass	PHBAs 3B Selection	This file describes the
	selected studies for	Sheets_4.1.22_screened 4.4.22.xlsx	selected files for 3B
	3B extraction		extraction.
21	PHBA subclass	PHBAs 3B Selection Heatmaps	This file describes how the
	information and	4.1.22.xlsx	data sources were selected
	heatmaps for Level 3B		for 3B extraction.
	study selection		
22	PHBA subclass	PHBAs PQ clean and viz.xlsx	This file describes how
	power-query cleaning		power queries were used to
	and visualizing of PDF		clean and visualize
	data sources		extracted data from PDF
			data sources (literature
			review or completed
			assessments).
23	PHBA subclass data	PHBAs MMDB Working.xlsx	This file counts the
	from Multimedia		occurrence of records for
	Monitoring Database		different types of monitoring
			data by chemical.
24	PHBA subclass	PHBAs DB Tox Totals Working.xlsx	This file counts the
	aggregated toxicity		occurrence of records for
	database counts		different types of toxicity
			data and aggregates these
			counts by chemical.
25	PHBzAF subclass	PHBzAF PDF 3B Extraction Final	3B extraction collects
	detailed 3B extraction	10.19.22.xlsx	detailed toxicity, exposure,
	counts		and/or risk information. The
			count of how often this
			detailed information occurs
			by chemical is presented in
			this file.
26	PHBzAF subclass	PHBzAF 3B selection sheets	This file describes the
	selected studies for	4.14.22-screened.xlsx	selected files for 3B
	3B extraction		extraction.
27	PHBzAF subclass	PHBzAF 3B selection Heatmaps	This file describes how the
	information and	4.14.22.xlsx	data sources were selected
	heatmaps for Level 3B		for 3B extraction.
00	study selection		TTL: Classic Street
28	PHBzAF subclass	PHBzAF PQ data clean and viz.xlsx	This file describes how
	power-query cleaning		power queries were used to
	and visualizing of PDF		clean and visualize
	data sources		extracted data from PDF
			data sources (literature
			review or completed
20			assessments).
29	PHBzAF subclass	PHBzAF MMDB Working.xlsx	This file counts the
	data from Multimedia		occurrence of records for
	Monitoring Database		different types of monitoring
20			data by chemical.
30	PHBzAF subclass	PHBzAF DB Tox Totals Working.xlsx	This file counts the
	aggregated toxicity		occurrence of records for
	database counts		different types of toxicity

#	Descriptive Name	File Name	Brief Description
			data and aggregates these counts by chemical.
31	PHPhAE subclass detailed 3B extraction counts	PHPhAE PDF 3B Extraction Final 10.20.22.xlsx	3B extraction collects detailed toxicity, exposure, and/or risk information. The count of how often this detailed information occurs by chemical is presented in this file.
32	PHPhAE subclass selected studies for 3B extraction	PHPhAE 3B selection sheets 4.21.22-screened.xlsx	This file describes the selected files for 3B extraction.
33	PHPhAE subclass information and heatmaps for Level 3B study selection	PHPhAE 3B selection Heatmaps 4.21.22.xlsx	This file describes how the data sources were selected for 3B extraction.
34	PHPhAE subclass power-query cleaning and visualizing of PDF data sources	PHPhAE PQ data clean and viz.xlsx	This file describes how power queries were used to clean and visualize extracted data from PDF data sources (literature review or completed assessments).
35	PHPhAE subclass data from Multimedia Monitoring Database	PHPhAE MMDB Working.xlsx	This file counts the occurrence of records for different types of monitoring data by chemical.
36	PHPhAE subclass aggregated toxicity database counts	PHPhAE DB Tox Totals Working.xlsx	This file counts the occurrence of records for different types of toxicity data and aggregates these counts by chemical.
37	PHA subclass detailed 3B extraction counts	PHAs PDF 3B Extraction Final 10.21.22.xlsx	3B extraction collects detailed toxicity, exposure, and/or risk information. The count of how often this detailed information occurs by chemical is presented in this file.
38	PHA subclass selected studies for 3B extraction	PHAs 3B Selection sheets 8.5.22.xlsx	This file describes the selected files for 3B extraction.
39	PHA subclass information and heatmaps for Level 3B study selection	PHAs 3B Selection Heatmaps 8.5.22.xlsx	This file describes how the data sources were selected for 3B extraction.
40	PHA subclass power- query cleaning and visualizing of PDF data sources	PHAs PQ clean and viz.xlsx	This file describes how power queries were used to clean and visualize extracted data from PDF data sources (literature

#	Descriptive Name	File Name	Brief Description
			review or completed
			assessments).
41	PHA subclass data	PHAs MMDB Working.xlsx	This file counts the
	from Multimedia Monitoring Database		occurrence of records for
			different types of monitoring
			data by chemical.
42	PHA subclass	PHAs DB Tox Totals Working.xlsx	This file counts the
	aggregated toxicity		occurrence of records for
	database counts		different types of toxicity
			data and aggregates these
			counts by chemical.
43	PHPhD subclass detailed 3B extraction counts	PHPhDs PDF 3B Extraction Final 10.24.22.xlsx	3B extraction collects
			detailed toxicity, exposure,
			and/or risk information. The
			count of how often this
			detailed information occurs
			by chemical is presented in
			this file.
44	PHPhD subclass	PHPhDs 3B selection sheets	This file describes the
	selected studies for	4.27.22-screened.xlsx	selected files for 3B
4.5	3B extraction		extraction.
45	PHPhD subclass	PHPhDs 3B selection heatmaps	This file describes how the
	information and	4.27.22.xlsx	data sources were selected
	heatmaps for Level 3B		for 3B extraction.
40	study selection	DUDED DO data alage and viz vlav	This file describes how
46	PHPhD subclass	PHPhDs PQ data clean and viz.xlsx	This file describes how
	power-query cleaning		power queries were used to clean and visualize
	and visualizing of PDF data sources		extracted data from PDF
	uala sources		
			data sources (literature review or completed
			assessments).
47	PHPhD subclass data from Multimedia	PHPhDs MMDB Working.xlsx	This file counts the
47			occurrence of records for
	Monitoring Database		different types of monitoring
	Monitoring Database		data by chemical.
48	PHPhD subclass aggregated toxicity	PHPhDs DB Tox Totals Working.xlsx	This file counts the
-0			occurrence of records for
			different types of toxicity
	dalabase counts		
	database counts		data and addredates these
	database counts		data and aggregates these counts by chemical.
49		PHACbx PDF 3B Extraction Final	counts by chemical.
49	PHACbx subclass	PHACbx PDF 3B Extraction Final	counts by chemical. 3B extraction collects
49	PHACbx subclass detailed 3B extraction	PHACbx PDF 3B Extraction Final 10.25.22.xlsx	counts by chemical. 3B extraction collects detailed toxicity, exposure,
49	PHACbx subclass		counts by chemical. 3B extraction collects detailed toxicity, exposure, and/or risk information. The
49	PHACbx subclass detailed 3B extraction		counts by chemical. 3B extraction collects detailed toxicity, exposure, and/or risk information. The count of how often this
49	PHACbx subclass detailed 3B extraction		counts by chemical. 3B extraction collects detailed toxicity, exposure, and/or risk information. The count of how often this detailed information occurs
49	PHACbx subclass detailed 3B extraction		counts by chemical. 3B extraction collects detailed toxicity, exposure, and/or risk information. The count of how often this detailed information occurs by chemical is presented in
	PHACbx subclass detailed 3B extraction counts	10.25.22.xlsx	counts by chemical. 3B extraction collects detailed toxicity, exposure, and/or risk information. The count of how often this detailed information occurs by chemical is presented in this file.
49 50	PHACbx subclass detailed 3B extraction		counts by chemical. 3B extraction collects detailed toxicity, exposure, and/or risk information. The count of how often this detailed information occurs by chemical is presented in

#	Descriptive Name	File Name	Brief Description
51	PHACbx subclass information and heatmaps for Level 3B study selection	Not present because no studies selected for 3B for this class	This file describes how the data sources were selected for 3B extraction.
52	PHACbx subclass power-query cleaning and visualizing of PDF data sources	PHACbx PQ data clean and viz.xlsx	This file describes how power queries were used to clean and visualize extracted data from PDF data sources (literature review or completed assessments).
53	PHACbx subclass data from Multimedia Monitoring Database	PHACbx MMDB Working.xlsx	This file counts the occurrence of records for different types of monitoring data by chemical.
54	PHACbx subclass aggregated toxicity database counts	PHACbx DB Tox Totals Working.xlsx	This file counts the occurrence of records for different types of toxicity data and aggregates these counts by chemical.
55	PHB subclass detailed 3B extraction counts	PHBs PDF 3B Extraction Final 10.21.22.xlsx	3B extraction collects detailed toxicity, exposure, and/or risk information. The count of how often this detailed information occurs by chemical is presented in this file.
56	PHB subclass selected studies for 3B extraction	PHBs 3B Selection Sheets 7.8.22.xlsx	This file describes the selected files for 3B extraction.
57	PHB subclass information and heatmaps for Level 3B study selection	PHBs 3B Selection Heatmaps 7.8.22.xlsx	This file describes how the data sources were selected for 3B extraction.
58	PHB subclass power- query cleaning and visualizing of PDF data sources	PHBs PQ clean and viz.xlsx	This file describes how power queries were used to clean and visualize extracted data from PDF data sources (literature review or completed assessments).
59	PHB subclass data from Multimedia Monitoring Database	PHBs MMDB Working.xlsx	This file counts the occurrence of records for different types of monitoring data by chemical.
60	PHB subclass aggregated toxicity database counts	PHBs DB Tox Totals Working.xlsx	This file counts the occurrence of records for different types of toxicity data and aggregates these counts by chemical.

#	Descriptive Name	File Name	Brief Description
61	PHPBI subclass detailed 3B extraction counts	PHPBI PDF 3B Extraction Final 11.01.22.xlsx	3B extraction collects detailed toxicity, exposure, and/or risk information. The count of how often this detailed information occurs by chemical is presented in this file.
62	PHPBI subclass selected studies for 3B extraction	PHPBI 3B Selection Sheets 8.16.22.xlsx	This file describes the selected files for 3B extraction.
63	PHPBI subclass information and heatmaps for Level 3B study selection	PHPBIs 3B Selection Heatmaps 8.16.22.xlsx	This file describes how the data sources were selected for 3B extraction.
64	PHPBI subclass power-query cleaning and visualizing of PDF data sources	PHPBIs PQ clean and viz.xlsx	This file describes how power queries were used to clean and visualize extracted data from PDF data sources (literature review or completed assessments).
65	PHPBI subclass data from Multimedia Monitoring Database	PHPBIs MMDB Working.xlsx	This file counts the occurrence of records for different types of monitoring data by chemical.
66	PHPBI subclass aggregated toxicity database counts	PHPBIs DB Tox Totals Working.xlsx	This file counts the occurrence of records for different types of toxicity data and aggregates these counts by chemical.
67	PHC subclass detailed 3B extraction counts	PHCs PDF 3B Extraction Final 11.08.22.xlsx	3B extraction collects detailed toxicity, exposure, and/or risk information. The count of how often this detailed information occurs by chemical is presented in this file.
68	PHC subclass selected studies for 3B extraction	PHCs 3B Selection Sheets 9.21.22.xlsx	This file describes the selected files for 3B extraction.
69	PHC subclass information and heatmaps for Level 3B study selection	PHCs 3B Selection Heatmaps 9.21.22.xlsx	This file describes how the data sources were selected for 3B extraction.
70	PHC subclass power- query cleaning and visualizing of PDF data sources	PHCs PQ clean and viz.xlsx	This file describes how power queries were used to clean and visualize extracted data from PDF data sources (literature review or completed assessments).

#	Descriptive Name	File Name	Brief Description
71	PHC subclass data	PHCs MMDB Working.xlsx	This file counts the
	from Multimedia	-	occurrence of records for
	Monitoring Database		different types of monitoring
	-		data by chemical.
72	PHC subclass	PHCs DB Tox Totals Working.xlsx	This file counts the
	aggregated toxicity	Ũ	occurrence of records for
	database counts		different types of toxicity
			data and aggregates these
			counts by chemical.
73	PHT subclass detailed	PHTs PDF 3B Extraction Final	3B extraction collects
	3B extraction counts	11.01.22.xlsx	detailed toxicity, exposure,
			and/or risk information. The
			count of how often this
			detailed information occurs
			by chemical is presented in
			this file.
74	PHT subclass	PHT 3B Selection Sheets	This file describes the
	selected studies for	9.21.22.xlsx	selected files for 3B
	3B extraction	0.2 1.22.000	extraction.
75	PHT subclass	PHT 3B Selection Heatmaps	This file describes how the
10	information and	9.21.22.xlsx	data sources were selected
	heatmaps for Level 3B	0.2 1.22.000	for 3B extraction.
	study selection		
76	PHT subclass power-	PHT PQ data clean and viz.xlsx	This file describes how
	query cleaning and		power queries were used to
	visualizing of PDF		clean and visualize
	data sources		extracted data from PDF
			data sources (literature
			review or completed
			assessments).
77	PHT subclass data	PHTs MMDB Working.xlsx	This file counts the
	from Multimedia		occurrence of records for
	Monitoring Database		different types of monitoring
	Mornioning Database		data by chemical.
78	PHT subclass	PHT DB Tox Totals Working.xlsx	This file counts the
	aggregated toxicity		occurrence of records for
	database counts		different types of toxicity
			data and aggregates these
			counts by chemical.
79	PHACh subclass	PHACh PDF 3B Extraction Final	3B extraction collects
	detailed 3B extraction	11.22.22.xlsx	detailed toxicity, exposure,
	counts	11.22.22.202	and/or risk information. The
			count of how often this
			detailed information occurs
			by chemical is presented in
			this file.
80	PHACh subclass	PHACh 3B Selection Sheets.xlsx	This file describes the
00	selected studies for		selected files for 3B
	3B extraction		extraction.

#	Descriptive Name	File Name	Brief Description
81	PHACh subclass information and heatmaps for Level 3B study selection	PHACh 3B Selection Heatmaps.xlsx	This file describes how the data sources were selected for 3B extraction.
82	PHACh subclass power-query cleaning and visualizing of PDF data sources	PHACh PQ clean and viz.xlsx	This file describes how power queries were used to clean and visualize extracted data from PDF data sources (literature review or completed assessments).
83	PHACh subclass data from Multimedia Monitoring Database	PHACh MMDB All Levels.xlsx	This file counts the occurrence of records for different types of monitoring data by chemical.
84	PHACh subclass aggregated toxicity database counts	PHACh DB Tox Totals All Levels.xlsx	This file counts the occurrence of records for different types of toxicity data and aggregates these counts by chemical.