



U.S. ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF INSPECTOR GENERAL

Congressionally Requested Information on EPA Utilization of Integrated Risk Information System

Report No. 13-P-0127

January 31, 2013



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Abbreviations

ATSDR	Agency for Toxic Substances and Disease Registry
CAA	Clean Air Act (Title V Clean Air Act permits)
EPA	U.S. Environmental Protection Agency
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
HEAST	Health Effects Assessment Summary Tables
IRIS	Integrated Risk Information System
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NPDES	National Pollutant Discharge Elimination System
NPDWR	National Primary Drinking Water Regulations
NSPS	New Source Performance Standards
OA	Office of the Administrator
OAR	Office of Air and Radiation
OCSP	Office of Chemical Safety and Pollution Prevention
OECA	Office of Enforcement and Compliance Assurance
OEI	Office of Environmental Information
OIG	Office of Inspector General
ORD	Office of Research and Development
OSWER	Office of Solid Waste and Emergency Response
OW	Office of Water
PPRTV	Provisional-Peer Reviewed Toxicity Values
RCRA-CE	Resource Conservation and Recovery Act Criminal Enforcement
RCRA-HWS	Resource Conservation and Recovery Act Hazardous Waste Site Restoration
SF Characterization	Superfund site characterization
SF-Remedial	Superfund site remedial activities
SF-Removal	Superfund site removal activities
TSCA	Toxic Substances Control Act

Hotline

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At a Glance

Why We Did This Review

We collected this information in response to a congressional request to “determine if EPA [U.S. Environmental Protection Agency] program offices and regions incorporate in their regulatory decision-making the exposure dose concentrations or values that are listed in the IRIS [Integrated Risk Information System] database.”

IRIS is an EPA Web-based program that evaluates risk information on human health effects that may result from exposure to environmental contaminants. IRIS consists of chemical assessments and quantitative toxicity values that have been developed by EPA and undergone peer review. IRIS contains information for more than 550 chemical substances, including cancer and non-cancer human health effects.

This work product addresses the following EPA Goal or Cross-Cutting Strategy:

- *Advancing science, research, and technological innovation*

For further information, contact our Office of Congressional and Public Affairs at (202) 566-2391.

The full report is at:
www.epa.gov/oig/reports/2013/20130131-13-P-0127.pdf

Congressionally Requested Information on EPA Utilization of Integrated Risk Information System

What We Found

Based on the results of our survey, 85 percent of the EPA survey respondents reported that they have used IRIS as their primary source for cancer values and 81 percent have used IRIS as their primary source for non-cancer values. More than half (51 percent) of the survey respondents who reported using IRIS as the primary source for cancer values indicated a reason they did so was because it was required for the activity they were conducting. Similarly, more than half (52 percent) of the survey respondents who reported using IRIS as the primary source for non-cancer values indicated a reason they did so was because it was required for the activity they were conducting. About one-third (34 percent) of the survey respondents reported that they have used an alternate source for toxicity values when an IRIS value was available. The primary reason selected for using an alternate source was that the alternate source was more up-to-date with current scientific practice or information.

We found no EPA policy mandating the use of any toxicity database including IRIS. The Office of Solid Waste and Emergency Response has issued a directive that recommends using EPA's IRIS as the first tier source of human health toxicity values. Sixty-seven percent of the respondents to this survey reported that they have used IRIS for Superfund program activities. Sixty-five percent of respondents also indicated that there are standard operating procedures regarding how to choose a source of toxicity values. Sixteen percent of respondents identified the Office of Solid Waste and Emergency Response directive as this standard operating procedure.

All survey responses were self-reported by the EPA respondents and were not verified by the Office of Inspector General.

We make no recommendations in this work product.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

THE INSPECTOR GENERAL

January 31, 2013

MEMORANDUM

SUBJECT: Congressionally Requested Information on EPA Utilization of
Integrated Risk Information System
Report No. 13-P-0127

FROM: Arthur A. Elkins, Jr.

A handwritten signature in black ink, appearing to read "Arthur A. Elkins, Jr.", is written over the printed name.

TO: Lek Kadeli
Acting Assistant Administrator for Research and Development

This is our final work product on the results of a survey of U.S. Environmental Protection Agency (EPA) staff conducted by the Office of Inspector General (OIG). We designed and conducted the survey and analyzed results from April 2012 through January 2013 in response to a congressional request. The purpose of the survey was to assess the EPA's use of the Integrated Risk Information System (IRIS).

Because this work product contains no recommendations, you are not required to respond to this document. Therefore, this work product is considered closed.

We have no objections to the further release of this report to the public. We will post this report to our website at <http://www.epa.gov/oig>.

Should you have any questions, please contact Carolyn Copper, Assistant Inspector General for Program Evaluation, at (202) 566-0829 or copper.carolyn@epa.gov; or Eric Lewis, Director, Special Reviews, at (202) 566-2664 or lewis.eric@epa.gov.

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Chapter 1

Introduction

Purpose

In February 2012, the Office of Inspector General (OIG), U.S. Environmental Protection Agency (EPA), received a congressional request to “determine if EPA program offices and regions incorporate in their regulatory decision-making the exposure dose concentrations or values that are listed in the IRIS [Integrated Risk Information System] database.” In response, we sought to determine:

- 1) Which EPA offices and regions utilize data derived from IRIS assessments or other similar systems.
- 2) How EPA offices and regions utilize data derived from IRIS assessments.
- 3) The circumstances under which EPA offices and regions use IRIS or an alternate system.

Background

IRIS is a human health assessment program that evaluates risk information on effects that may result from exposure to environmental contaminants. The IRIS program includes a Web-based database of chemical assessments and quantitative toxicity values that have been developed by EPA and undergone peer review. The IRIS database contains information for more than 550 chemical substances, including cancer and non-cancer human health effects that may result from exposure to various substances in the environment.

The National Center for Environmental Assessment within the Office of Research and Development (ORD) prepares the IRIS assessments, manages the peer review process, and maintains the online database. According to the National Center for Environmental Assessment, the main purpose of IRIS is to meet EPA statutory, regulatory, or program implementation needs with special emphasis on chemicals of high interest to the public or other levels of government.

IRIS is not the only source available to EPA employees for toxicity values. Other toxicity databases available to EPA staff include, but are not limited to:

- Provisional-Peer Reviewed Toxicity Values (PPRTVs), ORD Office of Superfund Remediation and Technology Innovation, EPA.
- Health Effects Assessment Summary Tables (HEAST), ORD Office of Superfund Remediation and Technology Innovation, EPA.
- California Environmental Protection Agency toxicity database.
- Agency for Toxic Substances and Disease Registry’s (ASTDR’s) Minimal Risk Levels.

We found no EPA policy mandating the use of any toxicity database, including IRIS. OSWER has issued a directive that identifies IRIS as the first tier of a hierarchy of databases and as the generally preferred source of human health toxicity values. The second tier is EPA's PPRTVs; the third tier includes other sources of information.

Scope and Methodology

We conducted this review from April 2012 to January 2013 and completed the survey from April to June 2012. We completed this review in accordance with generally accepted government auditing standards, except that we did not verify the information reported by survey respondents and did not use statistical techniques for selecting the survey participants. These efforts would likely have delayed reporting significantly. Not complying with these two elements of the standards does not have an effect on the outcome of this review. The scope of work completed sufficiently addresses the purpose of this review.

We designed a survey with 23 questions addressing the Agency's use of IRIS. The survey responses were self-reported by EPA personnel and were not verified by the OIG. A copy of the survey questions are in appendix A.

The survey included four opportunities for respondents to provide write-in answers. These write-in answers contain some information that is personally identifiable to specific respondents and did not provide quantifiable responses for analysis. The responses therefore are not included in this work product.

Participant Selection

All survey participants were current EPA employees at that time. We selected survey participants from two sources:

1. We contacted Agency audit follow-up coordinators from all 10 regional and 12 program offices and asked them to identify "EPA managers/supervisors/team leaders who work with, or supervise teams who work with, toxicity values provided in IRIS or other similar systems." We did not include OIG in our survey. This list identified 67 individuals.
2. We also used names provided by ORD. This list contained managers and senior scientists who use human health toxicity values in their groups. This list identified 442 individuals.

ORD also provided us with a second contact list. However, these individuals were not included in the survey due to the methodology used to select these individuals. After collating the lists and eliminating redundancies, we invited 415 individuals to participate in the survey. The response rate was 93 percent (387 respondents). However, after adjustments for partial responses (11), unconfirmed EPA employment status (2), and the non-use of carcinogenic or non-carcinogenic toxicity values (74), we had 300 responses from EPA personnel who stated that they used toxicity values in their work.

Chapter 2

Results of Survey

Of the 300 survey respondents, 256 (85 percent) indicated that IRIS was their *primary* source for carcinogenic toxicity values, and 242 (81 percent) indicated that IRIS was their *primary* source for non-cancer toxicity values. This chapter summarizes why respondents primarily use IRIS or an alternate source, why respondents use alternate values when a substance is available in IRIS, and how many respondents developed their own toxicity values. We also noted the following:

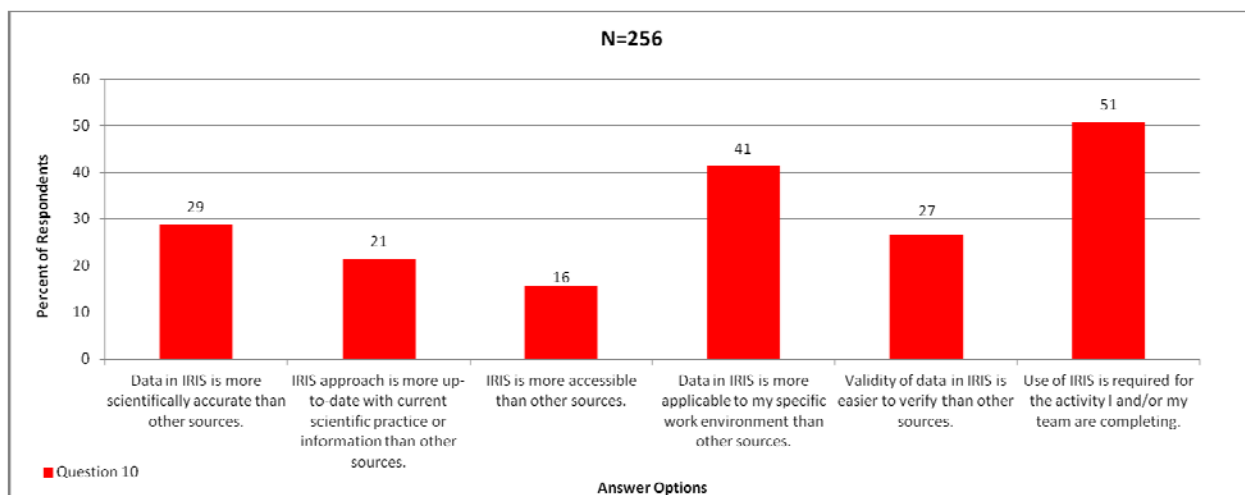
- Although 85 percent of the respondents indicated that they use IRIS as their primary source to provide carcinogenic toxicity values, less than 30 percent of the respondents identified a reason they use IRIS as either scientific accuracy, the ability to verify the data, or the currency of data.
- Thirty-four percent of all respondents (103) indicated that they have experienced a situation in which they researched a substance that was listed in IRIS but used toxicity values from another source instead. The majority of respondents (68 percent) who indicated that they used an alternate value from a source other than IRIS for substances available in IRIS cited currency with scientific practice or information as a reason they chose an alternate value.

Why some respondents use IRIS

Survey question 10 allowed the respondents to select up to three possible reasons why IRIS is used as the primary source for carcinogenic toxicity values. Because each respondent could select up to three responses, the sum of percentages for all answers is greater than 100 percent. As shown in figure 1, the percentage of respondents selecting each response is:

- Data in IRIS is more scientifically accurate than other sources (selected by 29% of respondents).
- The IRIS approach is more up to date with current scientific practice or information than other sources (selected by 21% of respondents).
- IRIS is more accessible than other sources (selected by 16% of respondents).
- Data in IRIS is more applicable to my specific work environment than other sources (selected by 41% of respondents).
- The validity of the IRIS data is easier to verify than other sources (selected by 27% of respondents).
- Use of IRIS is required for the activity I and/or my team are completing (selected by 51% of respondents).

Figure 1: Reasons why IRIS is the primary source for carcinogenic toxicity values



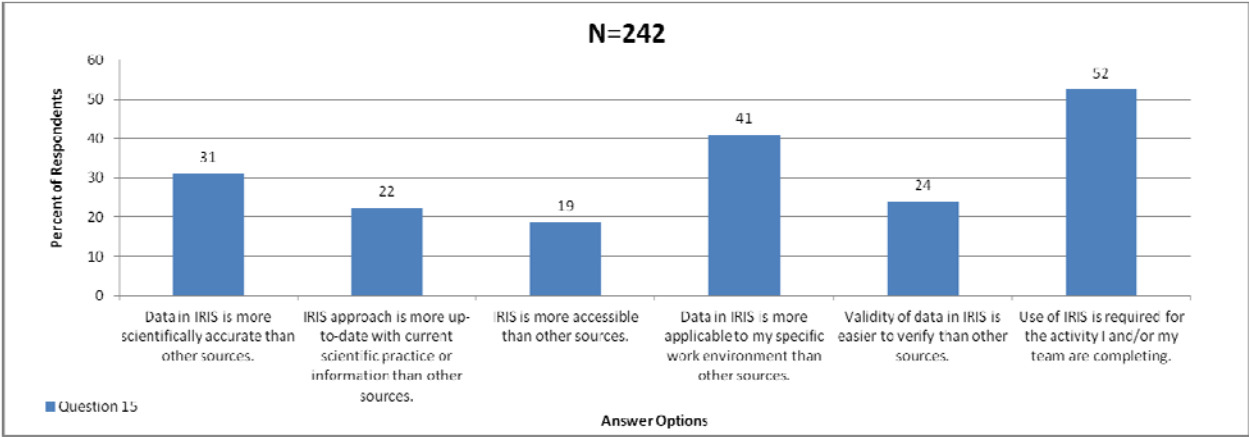
Note: N represents the number of respondents who answered this question. Percentages were rounded to the nearest whole number.

Source: OIG's IRIS utilization survey results.

Survey question 15 allowed the respondents to select up to three possible reasons why IRIS is used as the primary source for non-cancerous toxicity values. Because each respondent could select up to three responses, the sum of percentages for all answers is greater than 100 percent. As shown in Figure 2, the percentage of respondents selecting each response is:

- Data in IRIS is more scientifically accurate than other sources (selected by 31% of respondents).
- The IRIS approach is more up to date with current scientific practice or information than other sources (selected by 22% of respondents).
- IRIS is more accessible than other sources (selected by 19% of respondents)
- Data in IRIS is more applicable to my specific work environment than other sources (selected by 41% of respondents).
- The validity of the IRIS data is easier to verify than other sources (selected by 24% of respondents)
- Use of IRIS is required for the activity I and/or my team are completing (selected by 52% of respondents).

Figure 2: Reasons why IRIS is the primary source for non-cancerous toxicity values



Note: N represents the number of respondents who answered this question. Percentages were rounded to the nearest whole number.

Source: OIG’s IRIS utilization survey results.

Why some respondents use an alternate source

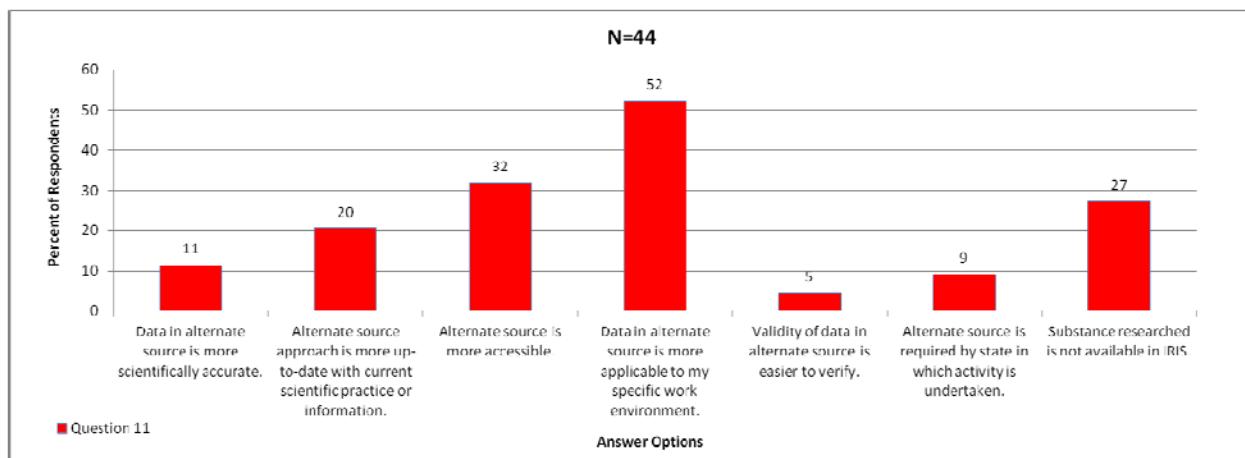
Only 8 percent of respondents reported that in conducting their main activity they did not use IRIS for either carcinogenic or non-cancerous toxicity values. We sought to understand through a series of questions what alternate source they use and why they use an alternate source.

Of the 300 respondents, 44 (15 percent) indicated that IRIS is not their primary source for carcinogenic toxicity values.

Survey question 11 allowed the respondents to select up to three possible reasons why they use an alternate source for carcinogenic toxicity values. Because each respondent could select up to three responses, the sum of percentages for all answers is greater than 100 percent. As shown in figure 3, the percentage of respondents selecting each response is:

- Data in alternate source is more scientifically accurate (selected by 11% of respondents).
- Alternate source is more up-to-date with current scientific practice or information (selected by 20% of respondents).
- Alternate source is more accessible (selected by 32% of respondents).
- Data in alternate source is more applicable to my specific work environment (selected by 52% of respondents).
- Validity of data in alternate source is easier to verify (selected by 5% of respondents).
- The state (in which activity is undertaken) requires an alternative source (selected by 9% of respondents).
- Substance researched is not available in IRIS (selected by 27% of respondents).

Figure 3: Reasons why respondents use an alternate source for carcinogenic toxicity values



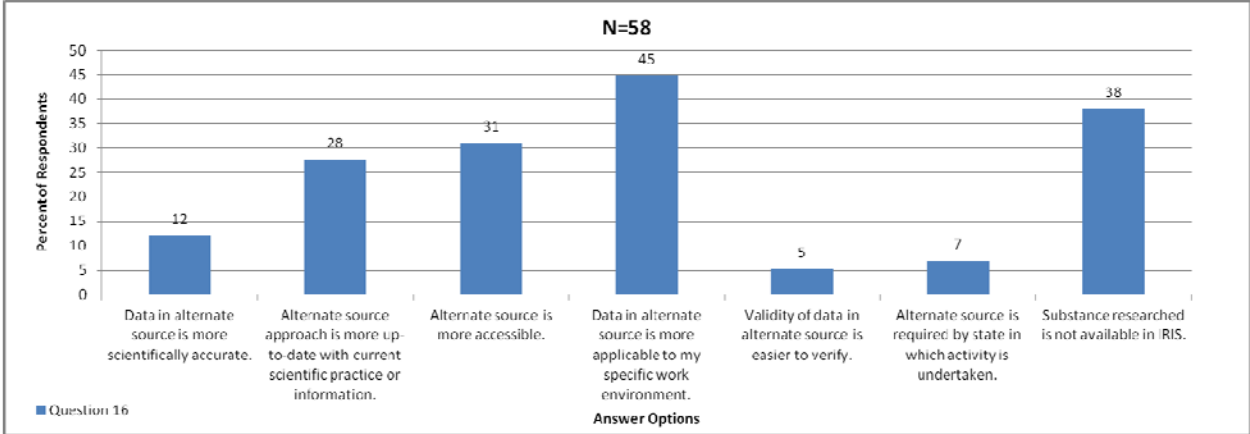
Note: N represents the number of respondents who answered this question. Percentages were rounded to the nearest whole number.

Source: OIG's IRIS utilization survey results.

Of the 300 respondents, 58 (19 percent) indicated that IRIS is not their primary source for non-cancerous toxicity values. Survey question 16 allowed the respondents to select up to three possible reasons why they use an alternate source for non-cancerous toxicity values. Because each respondent could select up to three responses, the sum of percentages for all answers is greater than 100 percent.

- Data in alternate source is more scientifically accurate (selected by 12% of respondents).
- Alternate source approach is more up-to-date with current scientific practice or information (selected by 28% of respondents).
- Alternate source is more accessible (selected by 31% of respondents).
- Data in alternate source is more applicable to my specific work environment (selected by 45% of respondents).
- Validity of data in alternate source is easier to verify (selected by 5% of respondents).
- The state (in which activity is undertaken) requires an alternative source (selected by 7% of respondents).
- Substance researched is not available in IRIS (selected by 38% of respondents).

Figure 4: Reasons why an alternate source is used for non-cancerous toxicity values



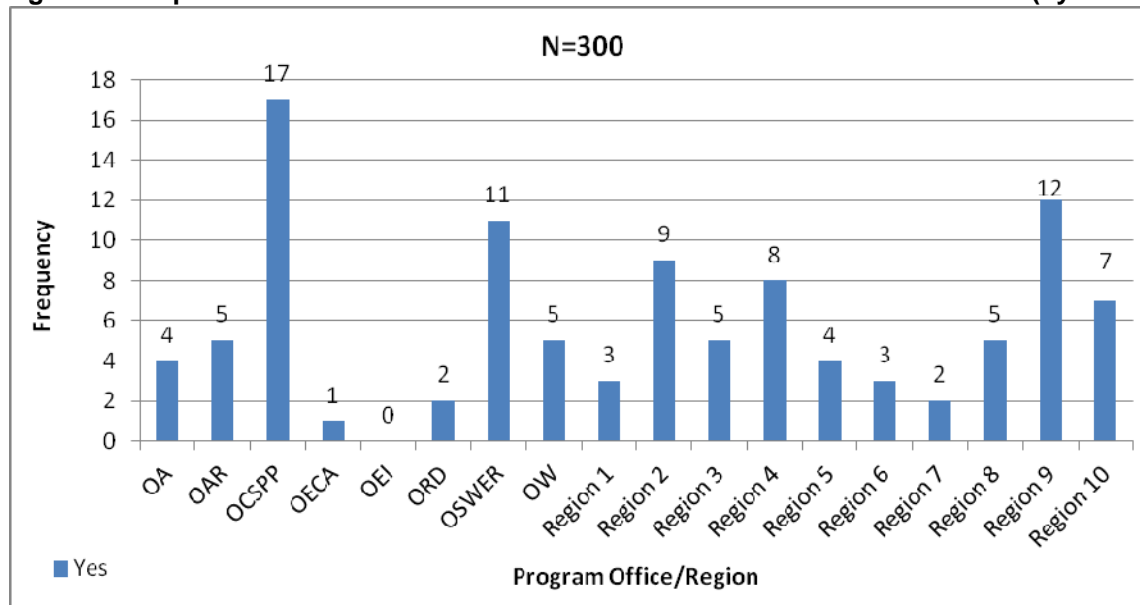
Note: N represents the number of respondents who answered this question. Percentages were rounded to the nearest whole number.

Source: OIG’s IRIS utilization survey results.

Why some respondents or their teams use alternate values for substances available in IRIS

Of the 300 respondents, 103 (34 percent) indicated that they have experienced a situation in which they or their team researched a substance listed in IRIS but used a toxicity value from another source instead of those available in IRIS. Figure 5 shows the number of respondents in each office who reported that they had experienced such a situation.

Figure 5: Respondents who use alternate values for substances available in IRIS (by office)



Note: Abbreviations for program offices identified are listed in the below paragraph (OEI stands for Office of Environmental Information). A total of 300 respondents answered the question. This figure displays only the 103 respondents that answered the question in the affirmative.

Source: OIG's IRIS utilization survey results.

While 34 percent of all respondents indicated experiencing a situation in which they researched a substance listed in IRIS but used a toxicity value from another source instead, more than 30 percent of the respondents from the following offices indicated they had experienced this situation:

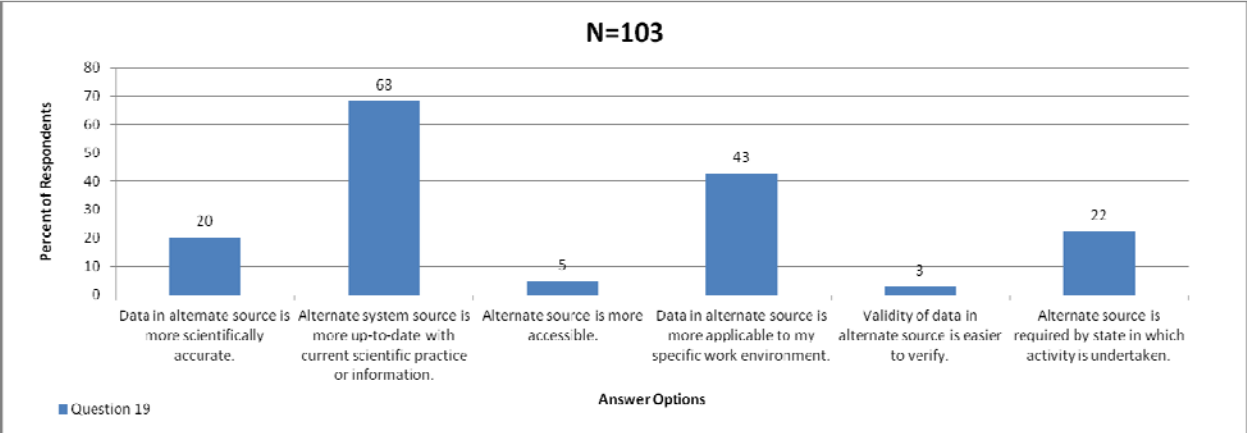
- Office of the Administrator (OA)
- Office of Air and Radiation (OAR)
- Office of Chemical Safety and Pollution Prevention (OCSPP)
- Office of Enforcement and Compliance Assurance (OECA)
- Office of Research and Development (ORD)
- Office of Solid Waste and Emergency Response (OSWER)
- Office of Water (OW)
- Regions 9 and 10¹

¹ OA, OECA, ORD, and OW had fewer than 10 survey respondents; further details are in Figure 8.

Survey question 19 allowed the respondents to select up to three possible reasons why they use alternate values for substances that are available in IRIS. Because each respondent could select up to three responses, the sum of percentages for all answers is greater than 100 percent. As shown in Figure 6, the percentage of respondents selecting each response is:

- Data in alternate source is more scientifically accurate (selected by 20% of respondents).
- Alternate system source is more up-to-date with current scientific practice or information (selected by 68% of respondents).
- Alternate source is more accessible (selected by 5% of respondents).
- Data in alternate source is more applicable to my specific work environment (selected by 43% of respondents).
- Validity of data in alternate source is easier to verify (selected by 3% of respondents).
- The state (in which activity is undertaken) requires an alternative source (selected by 22% of respondents).

Figure 6: Reasons why respondents use alternative values for substances available in IRIS



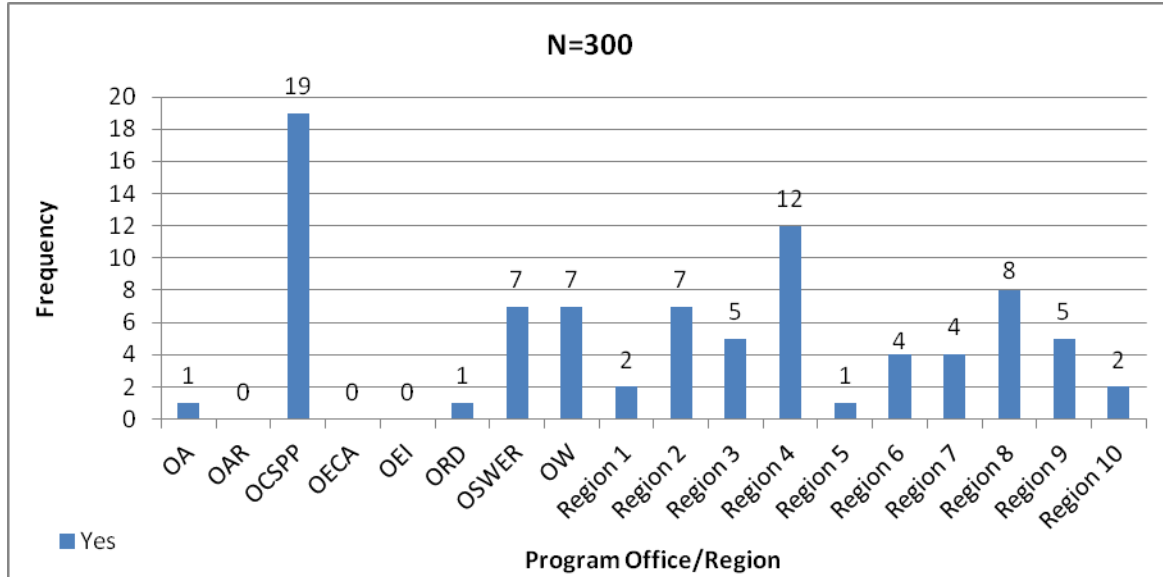
Note: N represents the number of respondents who answered this question. Percentages were rounded to the nearest whole number.

Source: OIG’s IRIS utilization survey results.

Respondents developing their own toxicity values

Of the 300 respondents, 85 (28 percent) indicated that they had experienced a situation in which they or their team developed their own toxicity values. Figure 7 shows the number of respondents in each office who reported having experienced such a situation.

Figure 7: Respondents developing their own toxicity values (by office)



Note: N represents the number of respondents who answered this question. This figure displays only those who answered the question in the affirmative.

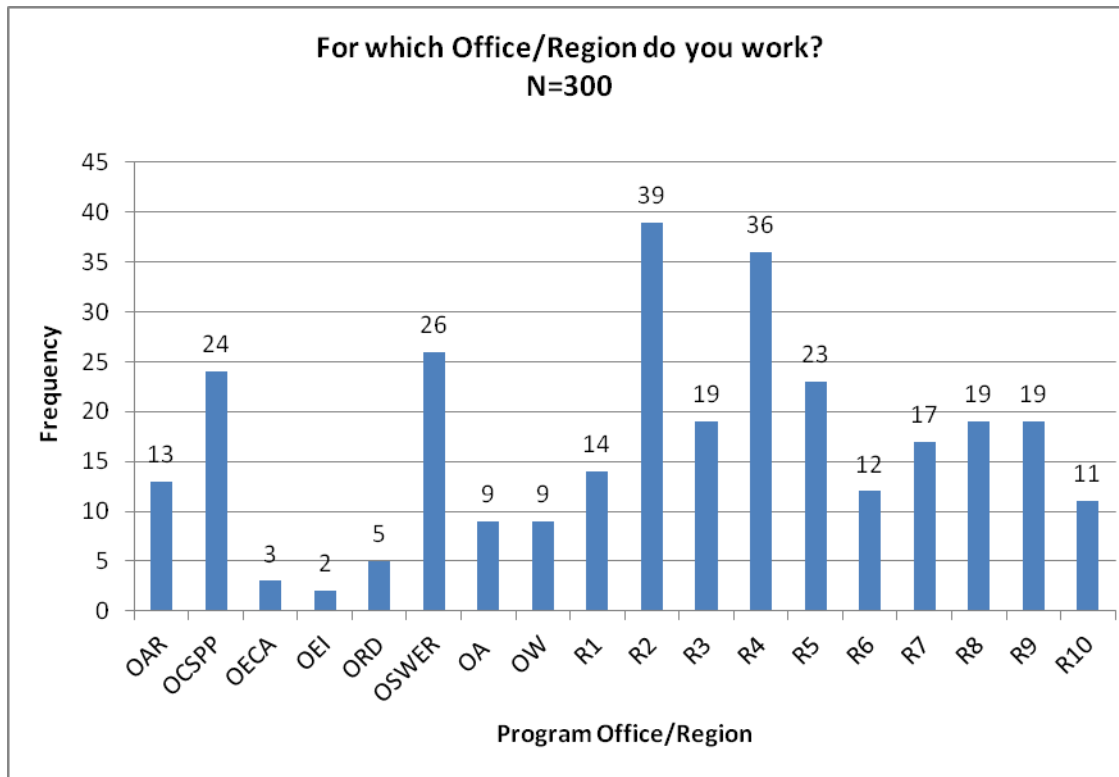
Source: OIG's IRIS utilization survey results.

More than 30 percent of respondents in two program offices (OCSPP and OIW) and three regions (4, 6, and 8), reported having experienced a situation in which they or their team developed their own toxicity values.

Remaining responses to the OIG IRIS Utilization Survey

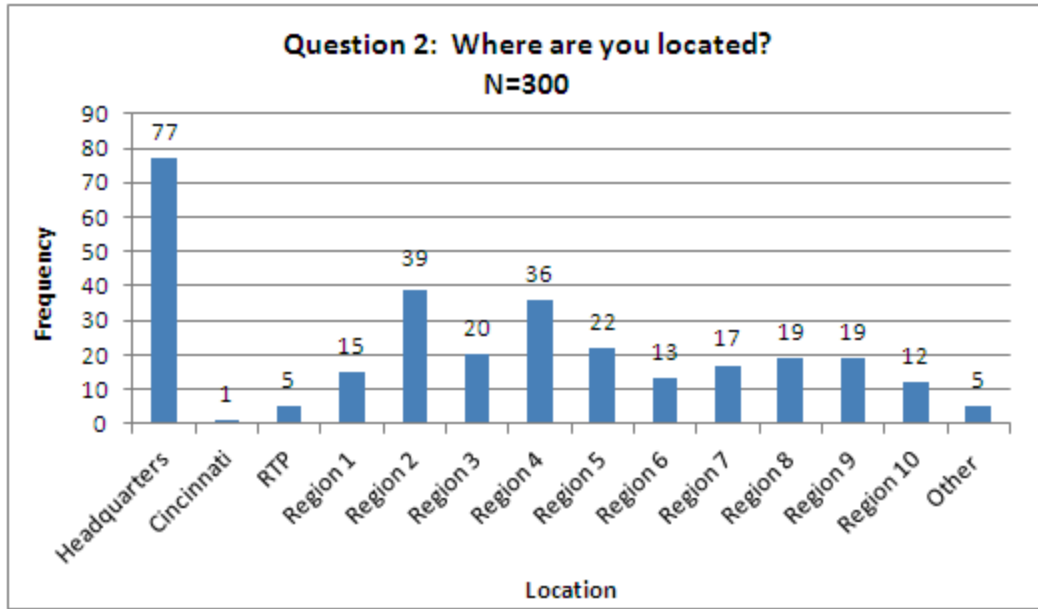
The following graphs (figures 8–21) show the remaining IRIS utilization survey questions and responses (questions 1-8, 12, 13, 17, 18, 20, and 22) not previously illustrated in this work product.

Figure 8: Question 1



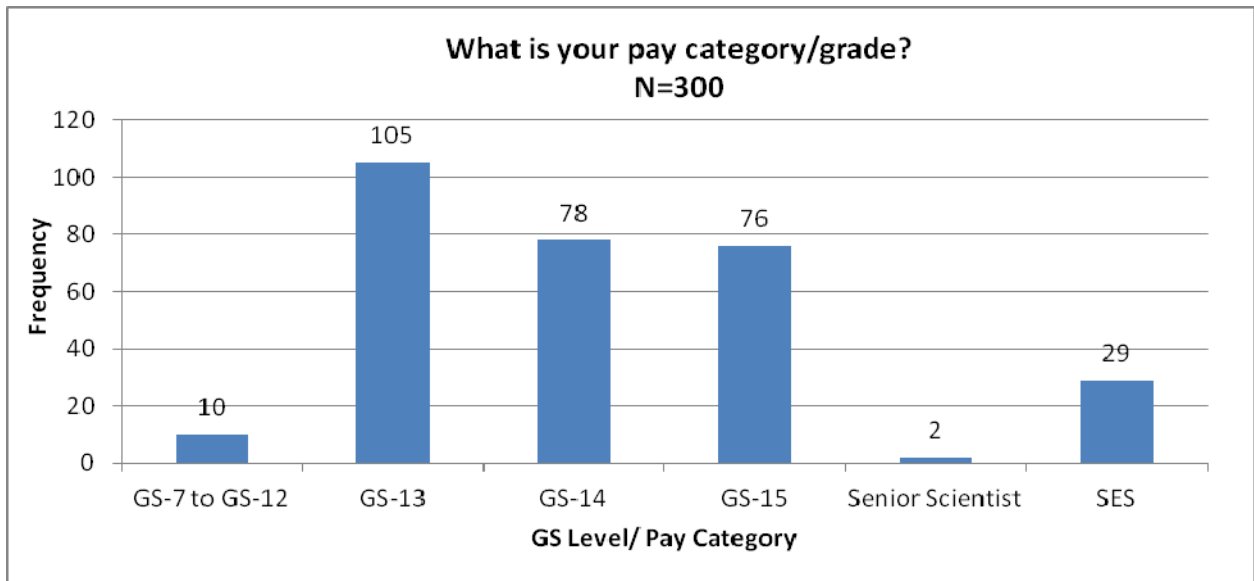
Source: OIG's IRIS utilization survey results.

Figure 9: Question 2



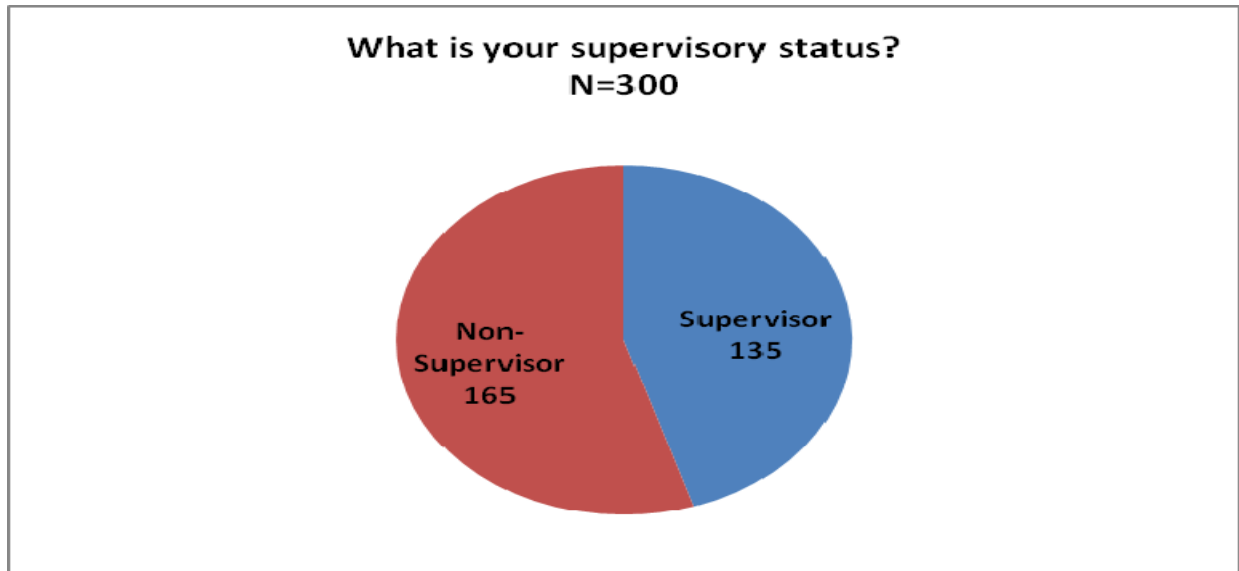
Source: OIG's IRIS utilization survey results.

Figure 10: Question 3



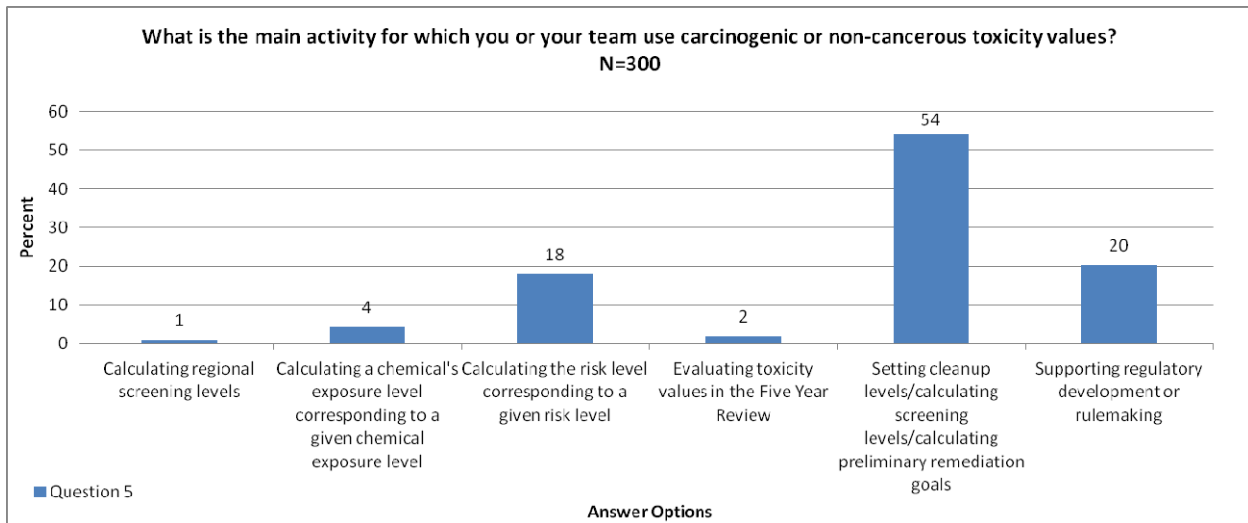
Source: OIG's IRIS utilization survey results.

Figure 11: Question 4



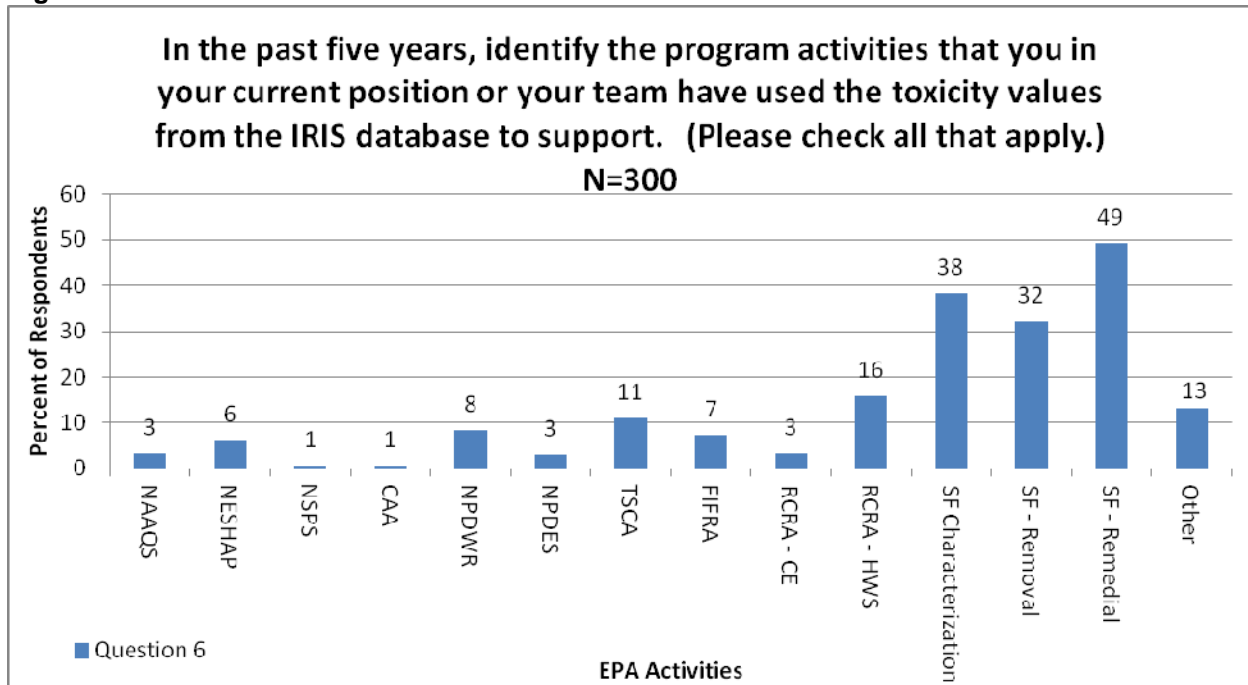
Source: OIG's IRIS utilization survey results.

Figure 12: Question 5



Source: OIG's IRIS utilization survey results.

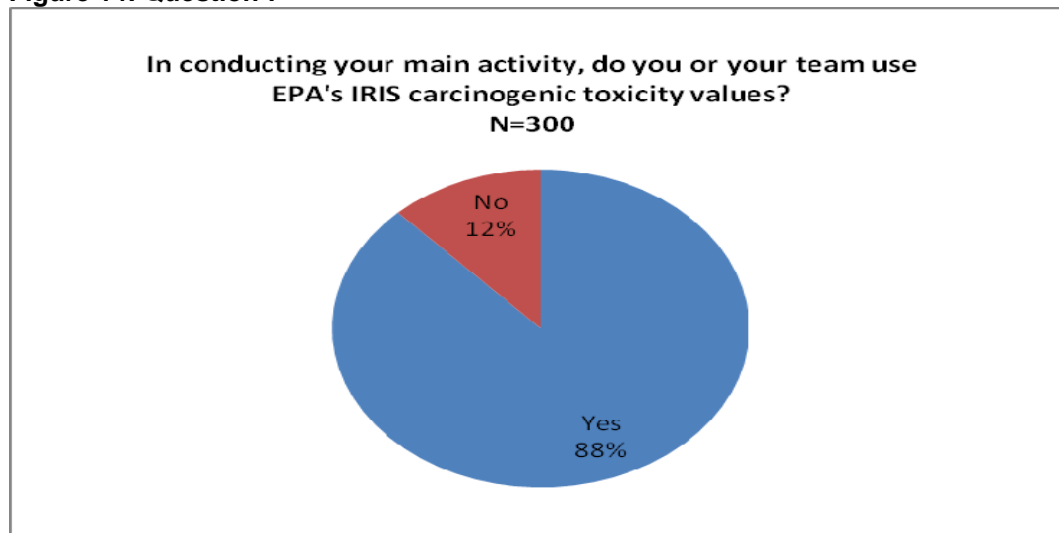
Figure 13: Question 6



Note: Abbreviated program activities identified: National Ambient Air Quality Standards (NAAQS); National Emission Standards for Hazardous Air Pollutants (NESHAP); New Source Performance Standards (NSPS); Title V Clean Air Act permits (CAA); National Primary Drinking Water Regulations (NPDWR); National Pollutant Discharge Elimination System (NPDES); Toxic Substances Control Act (TSCA); Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); Resource Conservation and Recovery Act Criminal Enforcement (RCRA-CE); Resource Conservation and Recovery Act Hazardous Waste Site Restoration (RCRA-HWS); Superfund site characterization (SF-Characterization); Superfund site removal activities (SF-Removal); and Superfund site remedial activities (SF-Remedial).

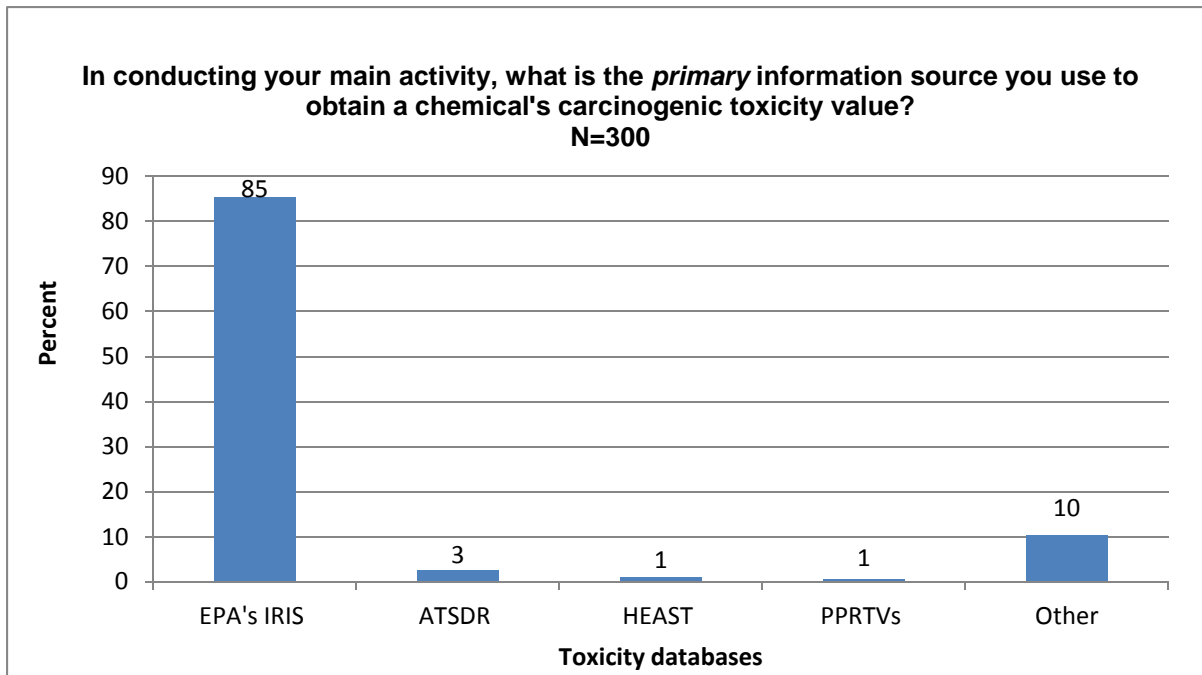
Source: OIG's IRIS utilization survey results.

Figure 14: Question 7



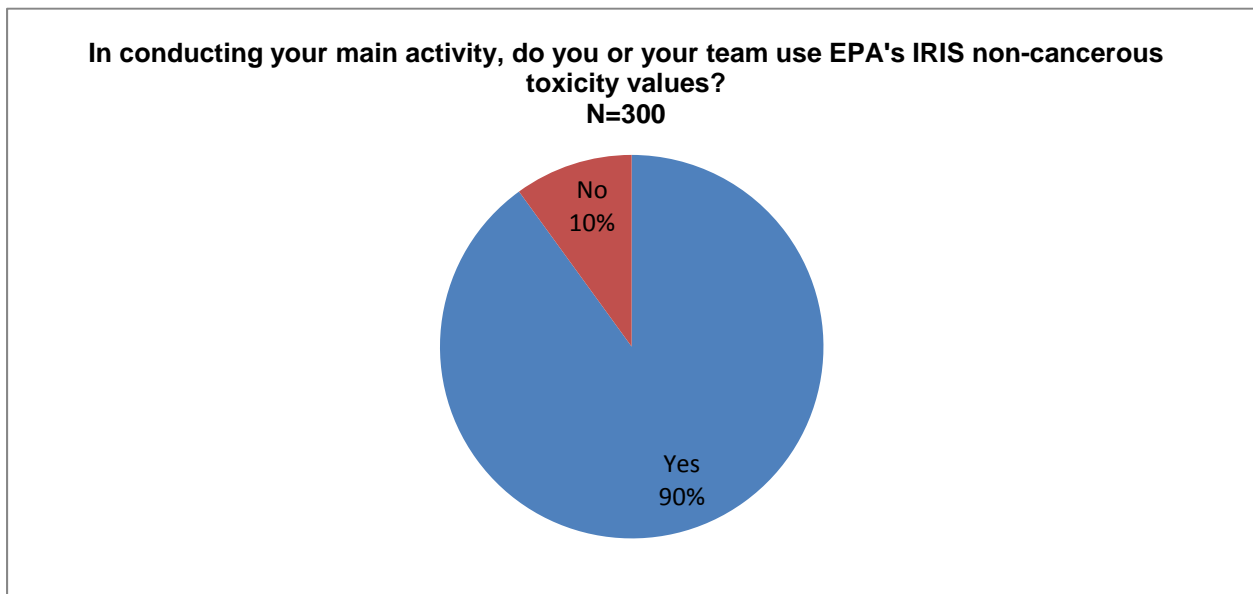
Source: OIG's IRIS utilization survey results.

Figure 15: Question 8



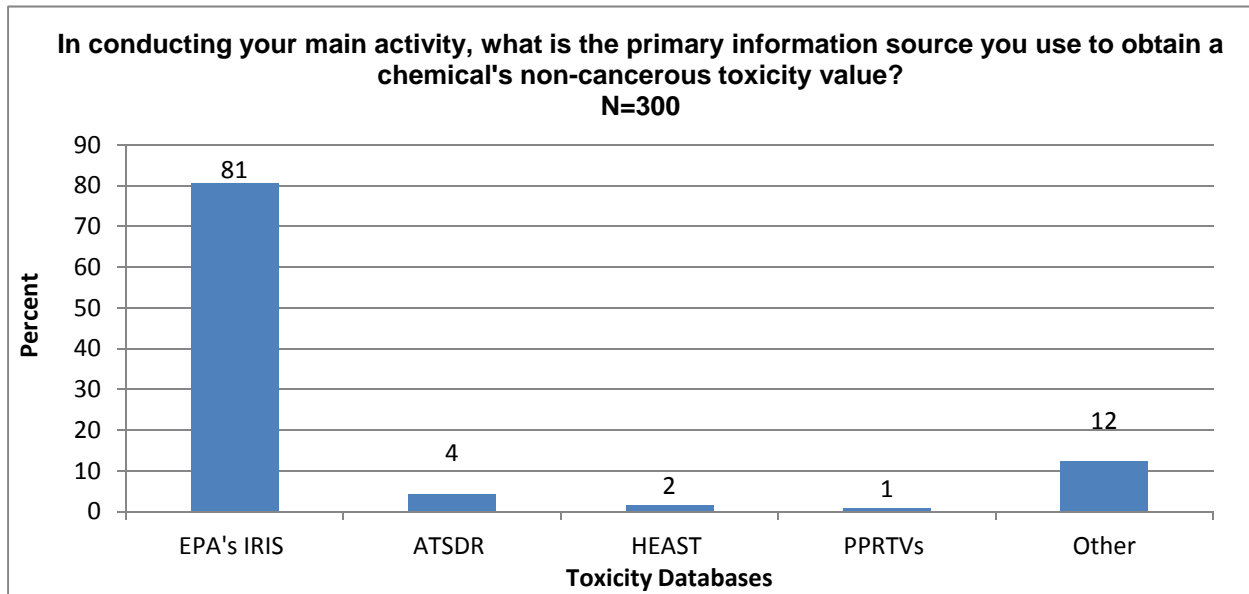
Source: OIG's IRIS utilization survey results.

Figure 16: Question 12



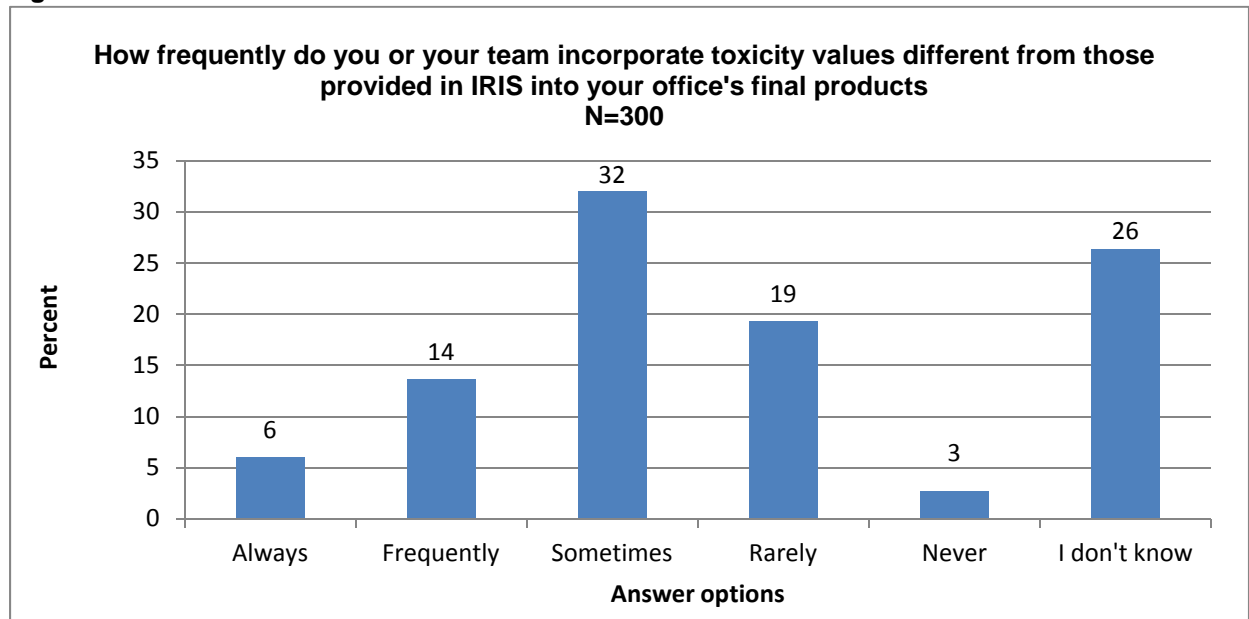
Source: OIG's IRIS utilization survey results.

Figure 17: Question 13



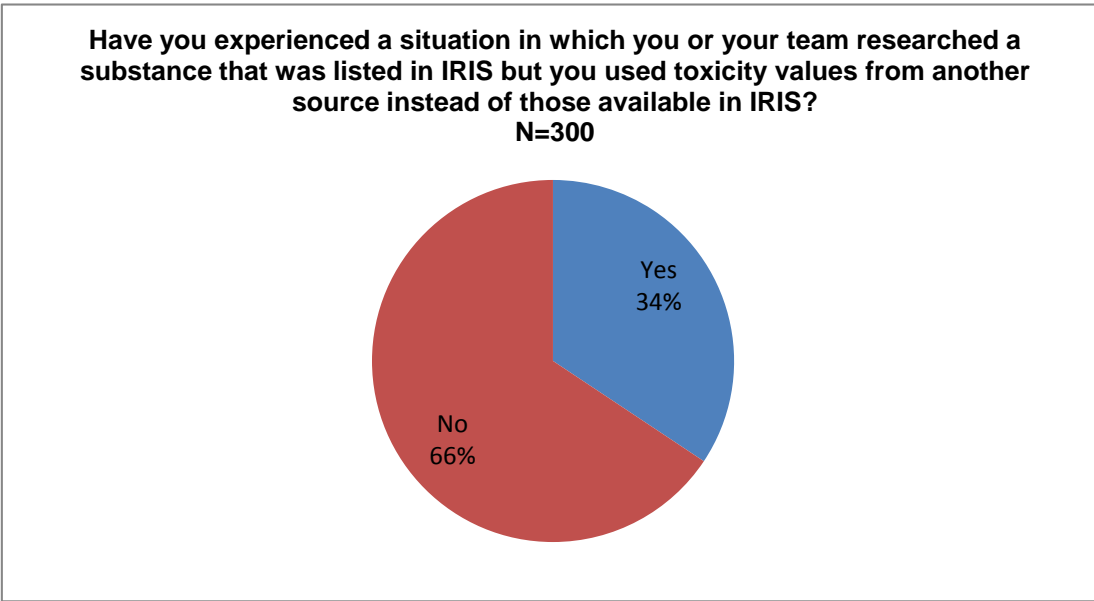
Source: OIG's IRIS utilization survey results.

Figure 18: Question 17



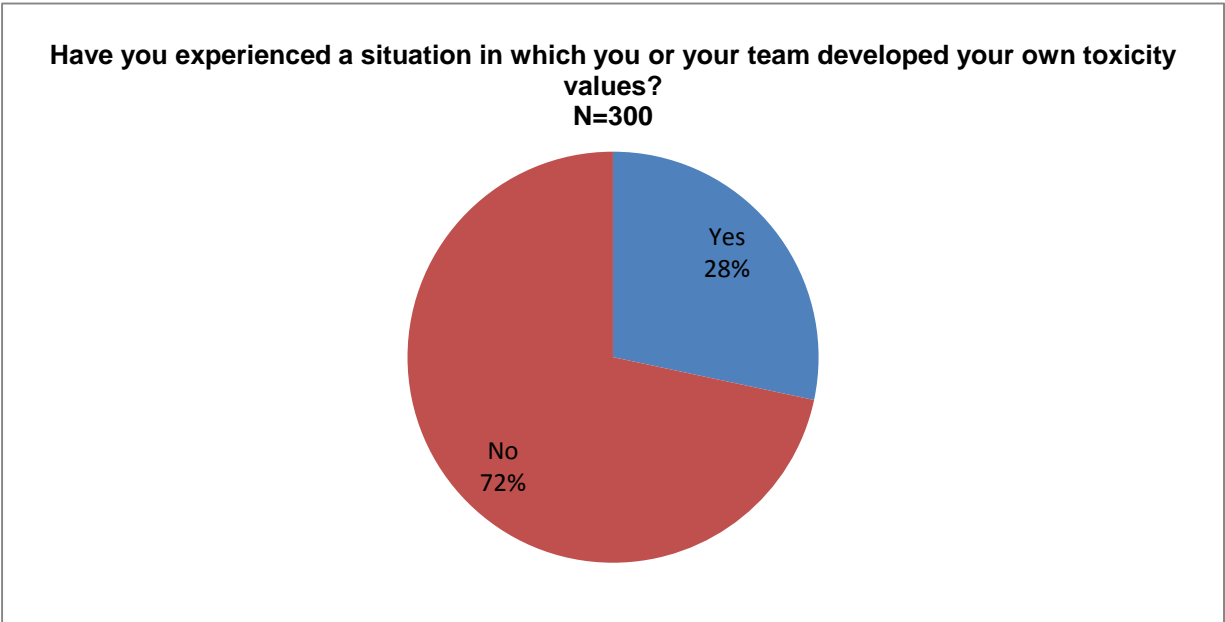
Source: OIG's IRIS utilization survey results.

Figure 19: Question 18



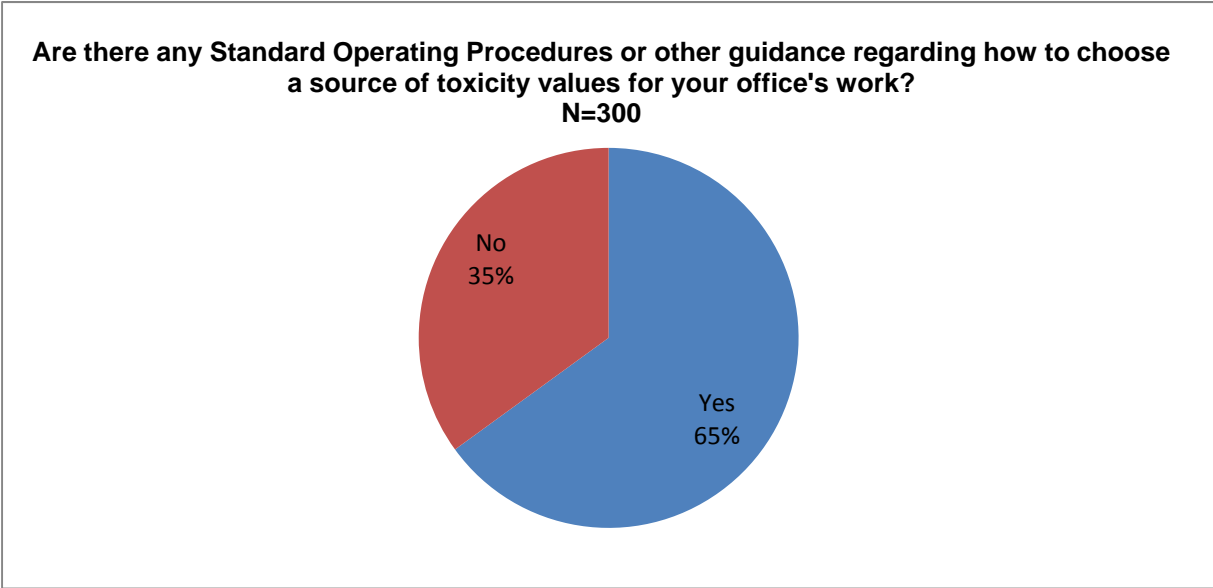
Source: OIG's IRIS utilization survey results.

Figure 20: Question 20



Source: OIG's IRIS utilization survey results.

Figure 21: Question 22



Source: OIG's IRIS utilization survey results.

Status of Recommendations and Potential Monetary Benefits

RECOMMENDATIONS						POTENTIAL MONETARY BENEFITS (in \$000s)	
Rec. No.	Page No.	Subject	Status ¹	Action Official	Planned Completion Date	Claimed Amount	Agreed-To Amount
No recommendations							

¹ O = recommendation is open with agreed-to corrective actions pending
 C = recommendation is closed with all agreed-to actions completed
 U = recommendation is unresolved with resolution efforts in progress

Survey

For which Office/Region do you work?

- Region 1
- Region 2
- Region 3
- Region 4
- Region 5
- Region 6
- Region 7
- Region 8
- Region 9
- Region 10
- Office of the Administrator (OA)
- Office of Administration and Resources Management (OARM)
- Office of Air and Radiation (OAR)
- Office of the Chief Financial Officer (OCFO)
- Office of Chemical Safety and Pollution Prevention (OCSP)
- Office of Enforcement and Compliance Assurance (OECA)
- Office of Environmental Information (OEI)
- Office of General Counsel (OGC)
- Office of Inspector General (OIG)
- Office of International and Tribal Affairs (OITA)
- Office of Research and Development (ORD)
- Office of Solid Waste and Emergency Response (OSWER)
- Office of Water (OW)

Where are you located?

- Region 1
 - Region 2
 - Region 3
 - Region 4
 - Region 5
 - Region 6
 - Region 7
 - Region 8
 - Region 9
 - Region 10
 - Headquarters
 - Research Triangle Park
 - Cincinnati
 - Other, please specify below.
-

What is your pay category/grade?

- GS-1
- GS-2
- GS-3
- GS-4
- GS-5
- GS-6
- GS-7
- GS-8
- GS-9
- GS-10
- GS-11
- GS-12
- GS-13
- GS-14
- GS-15
- Senior Executive Service
- Senior Level or Scientific or Professional
- Other

What is your supervisory status?

- Non-Supervisor
- Supervisor

What is the main activity for which you or your team use carcinogenic or non-cancerous toxicity values?

- Setting cleanup levels/calculating screening levels/calculating preliminary remediation goals
- Supporting regulatory development or rulemaking
- Calculating a chemical's exposure level corresponding to a given chemical exposure level
- Calculating the risk level corresponding to a given risk level
- Calculating Regional Screening Levels
- Evaluating toxicity values in the Five Year Review
- I and my team do not use carcinogenic or non-cancerous toxicity values.

In the past five years, identify the program activities that you in your current position or your team have used the toxicity values from the IRIS database to support. (Please check all that apply.)

- National Ambient Air Quality Standards (NAAQS)
- National Emission Standards for Hazardous Air Pollutants (NESHAP)
- New Source Performance Standards (NSPS)
- Title V Clean Air Act (CAA) permits
- National Primary Drinking Water Regulations (NPDWR)
- National Pollutant Discharge Elimination System (NPDES)
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

- Resource Conservation and Recovery Act (RCRA) Criminal Enforcement
- Resource Conservation and Recovery Act (RCRA) Hazardous waste site restoration
- Superfund site characterization
- Superfund site removal activities
- Superfund site remedial activities
- Other, please specify below

In conducting your main activity, do you or your team use EPA's IRIS carcinogenic toxicity values?

- Yes
- No

In conducting your main activity, what is the primary information source you use to obtain a chemical's carcinogenic toxicity value?

- EPA's IRIS [Integrated Risk Information System]
- PPRTVs [Provisional Peer-Reviewed Toxicity Values] HEAST [Health Effects Assessment Summary Tables]
- CalEPA [California Environmental Protection Agency] toxicity database
- ATSDR [Agency for Toxic Substances and Disease Registry] Minimal Risk Levels
- Other

Please identify the primary information source you use to obtain a chemical's carcinogenic toxicity value.

You indicated that IRIS is the primary source you use to obtain a chemical's carcinogenic toxicity value. Why is IRIS your primary source? You may choose up to three (3) responses.

- Data in IRIS is more scientifically accurate than other sources.
- IRIS approach is more up-to-date with current scientific practice or information than other sources.
- IRIS is more accessible than other sources.
- Data in IRIS is more applicable to my specific work environment than other sources.
- Validity of data in IRIS is easier to verify than other sources.
- Use of IRIS is required for the activity I and/or my team are completing.

You indicated IRIS is not the primary source of carcinogenic toxicity values for your main activity. Why do you use an alternate source (which contains values different than IRIS) instead of IRIS? You may choose up to three (3) responses.

- Data in alternate source is more scientifically accurate.
- Alternate source approach is more up-to-date with current scientific practice or information.
- Alternate source is more accessible.

- Data in alternate source is more applicable to my specific work environment.
- Validity of data in alternate source is easier to verify.
- Alternate source is required by state in which activity is undertaken.
- Substance researched is not available in IRIS.

In conducting your main activity, do you or your team use EPA's IRIS non-cancerous toxicity values?

- Yes
- No

In conducting your main activity, what is the primary information source you use to obtain a chemical's non-cancerous toxicity value?

- EPA's IRIS [Integrated Risk Information System] PPRTVs [Provisional Peer-Reviewed Toxicity Values]
- HEAST [Health Effects Assessment Summary Tables]
- CalEPA [California Environmental Protection Agency] toxicity database
- ATSDR [Agency for Toxic Substances and Disease Registry] Minimal Risk Levels

Please identify the primary information source you use to obtain a chemical's non-cancerous toxicity value.

You indicated that IRIS is the primary source you use to obtain a chemical's non-cancerous toxicity value. Why is IRIS your primary source? You may choose up to three (3) responses.

- Data in IRIS is more scientifically accurate than other sources
- IRIS approach is more up-to-date with current scientific practice or information than other sources.
- IRIS is more accessible than other sources.
- Data in IRIS is more applicable to my specific work environment than other sources.
- Validity of data in IRIS is easier to verify than other sources.
- Use of IRIS is required for the activity I and/or my team are completing.

You indicated IRIS is not the primary source of non-cancerous toxicity values for your main activity. Why do you use an alternate source (which contains values different than IRIS) instead of IRIS? You may choose up to three (3) responses.

- Data in alternate source is more scientifically accurate.
- Alternate source approach is more up-to-date with current scientific practice or information.
- Alternate source is more accessible.
- Data in alternate source is more applicable to my specific work environment.
- Validity of data in alternate source is easier to verify.

- Alternate source is required by state in which activity is undertaken.
- Substance researched is not available in IRIS.

How frequently do you or your team incorporate toxicity values different from those provided in IRIS into your office's final products?

- Always
- Frequently
- Sometimes
- Rarely
- Never
- I don't know

Have you experienced a situation in which you or your team researched a substance that was listed in IRIS but you used toxicity values from another source instead of those available in IRIS?

- Yes
- No

You indicated that you have experienced a situation in which you or your team researched a substance that was listed in IRIS but you used toxicity values from another source. In that situation, why did you use the values from the other source? You may choose up to three (3) responses.

- Data in alternate source is more scientifically accurate.
- Alternate system source is more up-to-date with current scientific practice or information.
- Alternate source is more accessible.
- Data in alternate source is more applicable to my specific work environment.
- Validity of data in alternate source is easier to verify.
- Alternate source is required by state in which activity is undertaken.

Have you experienced a situation in which you or your team developed your own toxicity values?

- Yes
- No

Please describe the situation in which you or your team developed your own toxicity values.

Are there any Standard Operating Procedures or other guidance regarding how to choose a source of toxicity values for your office's work?

- Yes
- No

Please provide further information regarding your Standard Operating Procedures for choosing a source of toxicity values such as guidance title, URL, or other identifying information. If you have no further information, please enter "None." Please email a PDF of the guidance you use (if available) to ... [Email address of OIG employee included here in actual survey]

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