



air pollution control district  
SANTA BARBARA COUNTY

# Guidelines for Preparing Air Toxics Emission Inventory Plans and Reports

AB 2588 Air Toxics  
“Hot Spots” Program

**August 2021**

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# **1. Introduction**

This document explains the requirements for preparing an Air Toxics Emission Inventory Plan (ATEIP) and Report (ATEIR) for the AB 2588 Air Toxics “Hot Spots” Program (1) in Santa Barbara County. All references in this document are numbered in parentheses; links are available in the References section.

An ATEIP and ATEIR must be completed for any of the following situations:

1. Your stationary source’s permitted potential to emit of any single criteria pollutant<sup>1</sup> is 10 tons per year or more and the Santa Barbara County Air Pollution Control District (District) has notified you that an ATEIP and ATEIR are required.
2. Your stationary source’s class is listed in Appendix E of the California Air Resources Board’s (CARB) *Emission Inventory Criteria and Guidelines* (2) and the District has notified you that an ATEIP and ATEIR are required.
3. Your stationary source has been identified by the District as posing a concern to public health and the District has notified you that an ATEIP and ATEIR are required.

If the ATEIP and/or ATEIR does not comply with the guidelines set forth in this document, the ATEIP and/or ATEIR will be returned, with District comments, to the operator for revision. When District comments are not substantial, and in order to obviate delays in the AB 2588 process, the District will “conditionally” approve an ATEIP or ATEIR. This type of approval will require document resubmittal by a date certain that includes the changes identified in the District approval letter.

## **1.1 Fees**

The District’s AB 2588 work for the review of an ATEIP, ATEIR, toxics source testing/sampling plans/reports, health risk assessment (HRA) and, if needed, public noticing and a risk reduction audit and plan (RRAP), will be conducted on a cost reimbursable basis pursuant to District Rule 210 – Fees (3). This means that the District’s costs will be assessed using the hourly rates of District staff based on the actual time worked on your project. The District’s AB 2588 work is conducted on a cost reimbursable basis because the existing AB 2588 “Hot Spots” fee schedule established by the State is insufficient to capture the District’s costs. A reimbursable deposit will be required if the stationary source does not already have a sufficient account balance with the District.

In addition to the reimbursable costs described above, the State’s AB 2588 “Hot Spots” fees are assessed on an annual basis as described by CARB’s “Hot Spots” State Fee table (4). Sources in the “Hot Spots” program are assessed fees based on their potential to be a health risk, the fee category, and the number of processes the facility has, or the complexity. A facility is assigned to a fee category based on its HRA results, prioritization scores, or if the facility is in a special class (i.e., small business, industrywide). For AB 2588 facilities that are not on a cost-reimbursable basis (i.e., facilities not actively undergoing an AB 2588 assessment), annual AB 2588 “Hot Spots” fees are assessed for both the State and the District according to the California Code of Regulations (CCR), Title 17, § 90700 – 90705 (5).

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<sup>1</sup> Criteria pollutants include total organic gases, particulate matter, nitrogen oxides and sulfur oxides, as defined by CARB’s *Emission Inventory Criteria and Guidelines* (2).

## 1.2 Purpose of the ATEIP

The purpose of the ATEIP is to ensure that the emission factors, calculation methodology, and all parameters that are included in quantifying the toxics emissions are provided to the District *and* approved by the District prior to implementation in the ATEIR. The ATEIP will include justification for any proposed assumptions, such as documentation for load factors and control efficiencies. The emission calculation methodology must be included for both the annual average emissions and the maximum hourly emissions. The maximum hourly emissions must be based on the maximum capacity, maximum throughput, or maximum recorded hourly usage; unless the device continually operates at maximum capacity, **the maximum hourly emissions are NOT equal to the annual emissions divided by the annual operating hours.**

The ATEIP will include a modeling protocol with receptor information, property boundaries, building information, emitting source information and a description of all modeling parameters and options. Once approved by the District, the ATEIP process is complete. It is **not** an iterative process to be revisited after the later steps in the AB 2588 assessment.

## 1.3 Purpose of the ATEIR

The purpose of the ATEIR is to execute the emission calculation methodology described in the District-approved ATEIP. The ATEIR will include documentation of all process data (e.g., annual reports, purchase records). The ATEIR will include detailed emission calculation spreadsheets for both the average annual and maximum hourly emissions. All calculations within spreadsheets must contain formulas (i.e., spreadsheets showing only values in the cells will be returned to the operator for revision). The ATEIR will also include the emissions summarized for the entire stationary source and by device in a format required for HARP 2 (see Section 3.2, *Emission Quantification*, of this document for additional information on the required format). Once approved by the District, the ATEIR process is complete. It is **not** an iterative process to be revisited after the later steps in the AB 2588 assessment.

**All AB 2588 HRAs must be performed after the District has approved the Air Toxics Emission Inventory Plan and Report for the stationary source.**

## 1.4 CARB's Emission Inventory Criteria and Guidelines

CARB's *Emission Inventory Criteria and Guidelines* (EICG Report) is the statewide resource for preparing an ATEIP and an ATEIR (2). CARB's EICG Report: 1) specifies which facilities are subject to AB 2588 and lists exemptions; 2) specifies information an operator must include in their ATEIP and ATEIR; 3) specifies source testing requirements and acceptable emission estimation methods; and 4) lists toxic air contaminants (TACs) that must be inventoried.

### 1.4.1 Routine and Predictable Operations

All emissions from routine and predictable operations (i.e., non-emergency usage) from both permitted and permit-exempt equipment must be included in the HRA. CARB clarified that "the "Hot Spots" program addresses all sources within a subject facility that emit listed toxics during routine and predictable operations of the facility. Both permitted and unpermitted sources located within the facility property are included" (6).

### 1.4.2 Special Situations

Fugitive emissions from haul roads are included in AB 2588 per CARB's direction that "dust emissions from motor vehicles activities at a facility must be reported" (6). At this time, the District does not

require that tailpipe emissions from motor vehicles be quantified or activity data from the motor vehicles be reported in the ATEIP and ATEIR.

Emissions from mobile sources that are not motor vehicles (i.e., self-propelled), must be reported in the ATEIP and ATEIR (6). Examples of these mobile sources include cranes and auxiliary generators.

Temporary equipment and portable equipment, including portable diesel engines<sup>2</sup>, must be included in the ATEIP and ATEIR. This includes equipment registered in the State's Portable Equipment Registration Program and their DOORS program.

All stationary diesel engines, including those less than 50 hp, are required to be included in the ATEIP and ATEIR<sup>2</sup>.

## 1.5 Inventory Year

AB 2588 assessments are based on a specified inventory year. Therefore, all emissions calculated for the ATEIR should reflect actual operations during the inventory year specified by the District.

## 1.6 Confidential Information

Trade secret and confidential information shall be handled according to the procedures described in District's Policy No. 6100.020 for submitting confidential material (<https://www.ourair.org/wp-content/uploads/6100-020-1.pdf>) and in Section VI.C., *Trade Secrets*, of the EICG Report (2). Two copies of the document should be submitted: one copy with all confidential information highlighted in yellow to distinguish it from non-confidential information, and one copy with all confidential information redacted and marked with a stamp stating that confidential information was deleted. The formatting and page numbers in both copies of the document should match.

## 2. Elements of the ATEIP

### 2.1 Written Plan

The ATEIP will include a detailed written plan with stationary source information (described below in Section 2.2) and the *Modeling Protocol Tables for ATEIP* (described below in Sections 2.3, 2.4, 2.7 and 2.8). In addition, the written plan will contain detailed emission calculation methodologies with emission factors and all parameters (e.g., load factors, control efficiencies, fuel properties) for each source type, similar in format to the District's *Approved Emission Factors for Toxic Air Contaminants*, (7) discussed in Section 2.5 below.

Electronic files, including the *Modeling Protocol Tables for ATEIP* (8) in .xlsx format and a PDF copy of the written ATEIP, must be attached (via DVD, CD or downloadable link) as an appendix to the ATEIP.

### 2.2 Stationary Source Information

Include the following information regarding the stationary source and its surroundings:

- Stationary source name
- Stationary source identification number (SSID)

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<sup>2</sup> The District is unable to determine whether this equipment contributes to a significant risk without the location and activity data being submitted. For that reason, the District requires that this equipment is included in the ATEIP, ATEIR, and HRA.

- All facility names and facility identification numbers (FIDs) associated with the stationary source
- Location (street address and UTM coordinates, including datum)
- Description of stationary source operations
- Process flow diagram consisting of a comprehensive schematic drawing of the process flows that affect the nature or quantity of emissions (Section VI.B, *Flow Diagram*, of the EICG Report (2) provides additional information on the requirements of flow diagrams). In certain cases, the District may require more detail piping and instrumentation diagrams (P&IDs).
- Plot plan of stationary source
- Aerial photo map, with the following features labeled:
  - Stationary source property boundary
  - Buildings (labeled by ID)
  - Emitting sources (labeled by HARP 2 Source ID or name)

## 2.3 Source Parameters & Device Information – Modeling Protocol Table

The District's *Modeling Protocol Tables for ATEIP* (8) must be completed and submitted with the ATEIP. The *Modeling Protocol Tables for ATEIP* consists of the *AERMOD Options Table*, *Source Parameters Table*, *Source Groups Table*, *Building Parameters Table* and the *HARP 2 Options Table*. Section 3.4, *Source Parameters*, of Form-15i (9) describes the type of source parameters and their required inputs. Documentation (e.g., manufacturer specifications, source test reports, photos/diagrams showing volume/area sources with written description explaining choice of parameters) of source parameters is required.

### 2.3.1 Source Parameters Table

The *Source Parameters Table*, part of the *Modeling Protocol Tables for ATEIP* (8), must be completed and submitted with the ATEIP in electronic format which contains the following for each emitting source:

- Source (i.e., stack or release point) identification number
- Source name/description
- Source type (point, area, open pit, volume, line)
- Source UTM coordinates
- Source modeling parameters

Alternatively, the source parameter information may be submitted in an AERMOD input file (\*.inp, \*.adi) or AERMOD View project file (\*.isc).

### 2.3.2 Source Groups Table

The *Source Groups Table*, part of the *Modeling Protocol Tables for ATEIP* (8), must be completed and submitted with the ATEIP in electronic format. First, answer the yes/no question in row 5: Will only the District default source groups be included in the model? The District default is to include one source group per AERMOD Source ID, as well as including a source group containing all the sources in the model; see Section 3.4 of Form-15i (9). Note that HARP 2 automatically creates one source group per Source ID and does not include the option to group multiple Source IDs; therefore, the source group containing all sources is not required if the air dispersion model is run using HARP 2. However, if an

alternate user interface such as Lakes AERMOD View is used to run the air dispersion model, multiple Source IDs may be included in a single source group in AERMOD **if emissions are spread evenly throughout those sources** (e.g. roadway sources). Furthermore, by default, Lakes AERMOD View automatically creates a source group containing all sources.

If only the District default source groups will be used, the table of source group names and AERMOD Source IDs does not need to be completed. However, if multiple sources will be grouped (other than the default source group with all sources), the table must be completed.

### 2.3.3 Device Tables

Include the following tables in the ATEIP:

- *Device Operation Schedule Table* with the following information for each device:
  - Device name and identification number (use District device IDs when available)
  - Device description
  - Number of operating hours per day and per year, including which hours the device operates in a 24-hour day
  - Number of operating days per week, including which days (i.e., Monday through Sunday) the device operates in a 7-day week
  - Number of operating days or weeks per year
  - Indicate whether the device is part of the primary function of the stationary source
  - HARP 2 Source ID for the sources where emissions are released
- *TAC Device Table* with the following information for each device:
  - Device name and identification number (use District device IDs when available)
  - All TACs emitted by device (see example in Appendix A of this document), including the CAS Number

## 2.4 Building Parameters – Modeling Protocol Table

Parameters for buildings and other structures impacting building downwash must be submitted in electronic format in the *Building Parameters Table*, part of the *Modeling Protocol Tables for ATEIP* (8), with the ATEIP. Alternatively, a BPIP input file (\*.bpi, \*.pip, \*.inp, \*.prm) may be submitted in lieu of completing the *Building Parameters Table*. Building downwash is discussed in Section 3.5, *Building Impacts*, of Form-15i (9).

## 2.5 Emission Calculation Methodology

The District has published approved TAC emission factors for various source types in the spreadsheet *SBCAPCD-Approved TAC Emission Factors.xlsx* (10). The District's *Approved Emission Factors for Toxic Air Contaminants* (7), presents formulas to calculate toxic emissions for HRAs. **When available, use site-specific emission factors from District-approved source tests.**

The ATEIP must include the emission calculation equations for each emission source type, with all variables defined, including conversion factors. All equations should be numbered, and all terms should be defined with proper units identified directly below the equation. Parameters such as higher heating values (HHV) of fuel, engine brake-specific fuel consumption (BSFC), load factors and control efficiencies must be specified in the ATEIP for each applicable device. Documentation must be

submitted for any parameter not using the District's default values. Load factors are not allowed for maximum hourly emission calculations unless hourly records are kept that demonstrate the proposed load value was not exceeded at any time during the entire inventory year.

Safety Data Sheets (SDSs) must be submitted with the ATEIP for any devices/processes using mass balance and/or weight fractions based on SDSs. Typical processes would include solvent usage, painting and coating applications, welding, and abrasive blasting. For verification purposes, SDSs must be submitted for all of these processes, even if the SDS shows no Appendix A-1 pollutants<sup>3</sup>.

When non-default factors are used, include the factor reference in the applicable ATEIP section, along with the emission calculation equations and any required parameters. To reduce misprints, do not include a table of the emission factors in the body of the ATEIP; instead, attach a PDF or photocopy of the relevant pages from the referenced document in an appendix.

## 2.6 Source Testing

If source testing will be conducted, submit the source test plan as a separate document, and reference the source test plan in the ATEIP. This will allow the approval process of the ATEIP and source test plan to be independent of each other.

The District uses CARB's policy outlined in Appendix B of the EICG Report (2) for dealing with non-detects. CARB's policy allows for non-detect results to be reported as zero emissions *only if* three or more samples/runs are conducted, which *all* show non-detect. If one or more of the samples/runs had a value below the method detection limit (MDL), while at least one sample/run showed a value above the MDL, all non-detect results must be reported as one-half of the MDL. For the emission calculations, the values reported as one-half of the MDL must be averaged together with the other runs that were above the MDL. If only one sample/run is conducted and the result is below the MDL, the result must be reported at the MDL for emission calculations. **The MDL for each method must be included in the source test plan and approved by the District prior to source testing.** Failure to receive approval of the MDL prior to source testing may invalidate the test results or require that a technical uncertainty factor (TUF) is applied to the results.

## 2.7 AERMOD Options - Modeling Protocol Table

The District's requirements for performing air dispersion modeling for health risk assessments in Santa Barbara County are described in our Form-15i, *Modeling Guidelines for Health Risk Assessments* (9). The *AERMOD Options Table*, part of the District's *Modeling Protocol Tables for ATEIP* (8), lists all the options that are required for the air dispersion modeling. The table includes the District default values (if applicable), an empty column for the stationary source's proposed values, a reference to the sections of Form-15i with more information, and a column with additional notes about some of the modeling options. The completed table must be submitted with the ATEIP.

### 2.7.1 Urban or Rural Condition

Specify in the *AERMOD Options Table* whether the urban or rural option will be used in AERMOD. If the urban option will be used, include the surface roughness length and the population data in the *AERMOD Options Table*. Urban and rural conditions are discussed in Section 3.2, *Defining Urban and Rural Conditions*, of Form-15i (9).

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<sup>3</sup> Appendix A-1, *Substances for Which Emissions Must Be Quantified*, of CARB's EICG Report.



## 2.7.2 Terrain

All sources, buildings and receptors are required to have a base elevation, which is affected by the terrain of the site. USGS DEM files are available online at CARB's *Digital Elevation Model Files for HARP* webpage (11). As part of the ATEIP, **provide the file names in the *AERMOD Options Table* and a copy of the digital elevation map files (\*.dem)** that will be used in the HRA.

If the site is graded and the graded elevations are known, those elevations should be entered when defining the source parameters and building information in AERMOD. In the *AERMOD Options Table*, identify that graded elevations will be used. List the graded elevations in the *Source Parameters Table* and the *Building Parameters Table*. Terrain and digital elevation map files are discussed in Section 3.6, *Terrain*, of Form-15i (9).

## 2.7.3 Meteorological Data

The District-processed AERMOD meteorological data available on the District's *Meteorological Data* webpage should be used (12). For approval to use alternative meteorological data, submit a justification for the data use, including information regarding representativeness and quality assurance, along with the meteorological data (i.e., surface meteorological data file, \*.sfc, and profile meteorological data file, \*.pfl) to the District for review.

Specify in the *AERMOD Options Table* the station and years that will be used for the meteorological data. Specify the PROFBASE parameter, the reference for the meteorological data and whether the meteorological data was processed with the U star adjustment option. Meteorological data are discussed in Section 3.8.6, *Meteorological Data*, of Form-15i (9).

## 2.7.4 Pathway Receptors

Specify the location of the pasture, water body and drinking water source pathway receptors if applicable (i.e., if any multipathway pollutants are emitted by the facility) in the *AERMOD Options Table*. Pathway receptors are discussed in Section 3.8.1, *Pathway Receptors*, of Form-15i (9).

## 2.7.5 Receptor Grid Spacing

Specify the receptor grid spacing in the *AERMOD Options Table*. Grid spacing is discussed in Section 3.8.2, *Cartesian Receptor Grids*, of Form-15i (9).

## 2.7.6 Property Boundary Receptors

Specify the property boundary spacing in the *AERMOD Options Table*. In addition, include the property boundary receptors in a Lakes Environmental-compatible CSV file with the ATEIP. Property boundary receptors are discussed in Section 3.8.3, *Property Boundary Receptors*, of Form-15i (9).

## 2.7.7 Residential and Worker Receptors

Cartesian grid receptors may be used for residential and worker receptors. Specify in the *AERMOD Options Table* the receptor spacing. Additional receptors (e.g., discrete or a more refined grid) may be required during the HRA process if there are residential or worker receptors that are not aligned with the grid that show the potential for a significant risk. Receptor spacing is discussed in Section 3.8.2, *Cartesian Receptor Grids*, of Form-15i (9). Residential receptors are discussed in Section 3.8.4, *Residential Receptors*, and worker receptors are discussed in Section 3.8.5, *Worker Receptors*, of Form-15i (9).

### 2.7.8 Sensitive Receptors

Specify in the *AERMOD Options Table* whether there are any sensitive receptors (schools, daycares, hospitals, adult/elderly care) located within 2 km of the property boundary. Identify the sensitive receptors in an attached table for the ATEIP and in a Lakes Environmental-compatible CSV file. The table must include a name/description of the sensitive receptors (e.g., Happy Time Preschool, Sutter Hospital), the type of sensitive receptor (i.e., daycare, hospital) and the receptor location in UTM's. In addition, an aerial photo must be included that identifies each sensitive receptor. Sensitive receptors are discussed in Section 3.8.6, *Sensitive Receptors*, of Form-15i (9).

### 2.7.9 Onsite Receptors

Specify in the *AERMOD Options Table* whether onsite receptors are present. If onsite receptors are present, include the receptors in an attached table for the ATEIP and in a Lakes Environmental-compatible CSV file. The table must include a description of the onsite receptors (e.g., rental farmhouse, vineyard workers), identify the type of onsite receptor (i.e., residential, worker) and include the receptor location in UTM's. An aerial photo must be included that identifies each receptor as residential, worker or sensitive. Onsite receptors are discussed in Section 3.8.7, *Onsite Receptors*, of Form-15i (9).

### 2.7.10 Variable Emissions

**The variable emissions option in AERMOD is not recommended for most projects.** When variable emissions are used, two air dispersion runs are required; one for long-term risk (based on annual average emission rates) and one for acute risk (based on the maximum hourly emission rates). If variable emissions are not used, only one air dispersion run is necessary. The variable emissions option should be used only for sources with emissions that fluctuate over time with a known schedule. Furthermore, **documentation of each emission source's schedule is required to use variable emissions.** If variable emissions will be used, identify this in the *AERMOD Options Table* and submit the information required by the *AERMOD Options Table* in an attached table, including:

- Names of sources (with the corresponding device IDs) that will use variable emissions
- Variable emission option for each applicable source for period files
- Variable emission scenario with emission rate factors for each applicable source for period files
- Variable emission option for each applicable source for maximum 1-hour files
- Variable emission scenario with emission rate factors for each applicable source for 1-hour files
- Documentation of each source's schedule

Variable emissions are discussed in Appendix A, *Variable Emissions Modeling*, of Form-15i (9).

## 2.8 HARP 2 Options - Modeling Protocol Table

The *HARP 2 Options Table*, part of the *Modeling Protocol Tables for ATEIP* (8), lists all the options that are required for the risk assessment calculations. The table includes the District default values (if applicable), an empty column for the stationary source's proposed values, a reference to the sections of Form-15i with more information, and a column with additional notes about some of the HARP 2 options. The completed table must be submitted with the ATEIP.

### 2.8.1 Tiered Approach to Risk Assessment

Specify in the *HARP 2 Options Table* whether Tier 2 adjustments will be used. As noted in Section 4.1, *Tiered Approach to Risk Assessment*, of Form-15i (9), **a Tier 1 HRA is always required in Santa**

**Barbara County.** If desired by the operator, a Tier 2 risk assessment may be submitted in addition to the Tier 1 HRA. If Tier 2 adjustments are proposed, submit all Tier 2 data and methods to be used for the site-specific estimates in the ATEIP for District approval.

### **2.8.2 Fraction of Time at Home**

Specify in the *HARP 2 Options Table* whether any of the fraction of time at home (FAH) options are expected<sup>4</sup> to be used in the HRA. The FAH option is discussed in Section 4.3.1, *Fraction of Time at Home*, of Form-15i (9).

### **2.8.3 Continuous Operations**

Specify in the *HARP 2 Options Table* whether the primary functions of the stationary source operate continuously. The *Device Operation Schedule Table* discussed in Section 2.3.2, *Device Tables*, of this document should clearly support the assertion of continuous or non-continuous operations.

### **2.8.4 8-Hour Chronic Non-Cancer Risk**

Specify in the *HARP 2 Options Table* the receptor types (i.e., residential, worker, sensitive) for which the 8-hour chronic non-cancer risk will be calculated. In addition, specify if the daily 8-hour hazard index (HI) will be post-processed with the daily average 8-hour concentration or if the 8-hour worker adjustment factor ( $WAF_{8\text{-hour}}$ ) will be used. If a  $WAF_{8\text{-hour}}$  will be used, specify the number of hours per day that the source operates, the number of days per week that the source operates, and the calculated  $WAF_{8\text{-hour}}$  value. After the initial HRA is conducted, the District may require the  $WAF_{8\text{-hour}}$  to be adjusted based on the operating schedule of the risk driving device, if it differs from the stationary source's operating schedule. The 8-hour chronic non-cancer risk is discussed in Section 4.3.2, *8-Hour Chronic Non-Cancer Risk*, of Form-15i (9).

### **2.8.5 Worker Exposure – Adjustment Factor for Cancer Risk**

Specify in the *HARP 2 Options Table* whether adjustments are required to the modeled long-term concentration for the worker exposure. If adjustments are required, specify if the hourly raw AERMOD output will be post-processed and analyzed, or if an adjustment factor will be used. If a cancer worker adjustment factor ( $WAF_{\text{cancer}}$ ) will be used, specify the number of hours per day that the source operates, the number of days per week that the source operates, the discount factor, and the calculated  $WAF_{\text{cancer}}$  value. If a discount factor of less than one is used to calculate the  $WAF_{\text{cancer}}$ , provide documentation and justification for the value used. After the initial HRA is conducted, the District may require the  $WAF_{\text{cancer}}$  to be adjusted based on the operating schedule of the risk driving device, if it differs from the stationary source's operating schedule. The worker exposure for cancer risk is discussed in Section 4.3.3, *Worker Exposure – Adjustment Factor for Cancer Risk*, of Form-15i (9).

### **2.8.6 Multipathway Analysis**

The list of multipathway pollutants and the specific pathways that can be evaluated for those pollutants are shown below in Table 2.8-6. If any multipathway pollutants are emitted, a multipathway analysis is required. Specify in the *HARP 2 Options Table* whether multipathway pollutants are emitted from the stationary source and include all required multipathway parameters (i.e., identified in the blue cells in rows 24 through 97 of the *HARP 2 Options Table*).

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<sup>4</sup> If there are schools within the area of analysis (2 km), it is expected that only the FAH option for ages greater than or equal to 16 years will be selected. However, to confirm which FAH options will be used, the initial HRA must be run with no FAH options selected to determine if a school or daycare is located within the 1 in a million isopleth.

**Table 2.8-6: Pathways to be Analyzed for Each Multipathway Pollutant**

Pollutant	Soil Ingestion	Dermal	Meat, Milk & Egg Ingestion	Fish Ingestion	Exposed Vegetable Ingestion	Leafy Vegetable Ingestion	Protected Vegetable Ingestion	Root Vegetable Ingestion	Water Ingestion	Breast Milk Ingestion
Arsenic & compounds	X	X	X	X	X	X	X	X	X	
Beryllium & compounds	X	X	X	X	X	X	X	X	X	
Cadmium & compounds	X	X	X	X	X	X	X	X	X	
Chromium VI & compounds	X	X	X <sup>1</sup>	X	X	X	X	X	X	
Fluorides	X	X	X	X	X	X	X	X	X	
Lead & compounds	X	X	X	X	X	X	X	X	X	X
Mercury & compounds	X	X	X	X	X	X	X	X	X	
Nickel & compounds	X	X	X	X	X	X	X	X	X	
Selenium & compounds	X	X	X	X	X	X	X	X	X	
Creosotes	X	X	X	X	X	X			X	X
Diethylhexylphthalate	X	X	X	X	X	X			X	
Hexachlorobenzene	X	X	X	X	X	X			X	
Hexachlorocyclohexanes	X	X	X	X	X	X			X	
4,4'-Methylene dianiline	X	X			X	X			X	
Polychlorinated biphenyls	X	X	X	X	X	X			X	X
Polychlorinated dibenzo-p-dioxins and dibenzofurans	X	X	X	X	X	X			X	X
Polycyclic aromatic hydrocarbons	X	X	X	X	X	X			X	X

<sup>1</sup> Chromium IV & compounds are evaluated for the cow's milk pathway, but not the egg or meat pathways.

The District's Form-15i (9) states that the water, fish, pig, beef and dairy pathways are evaluated in the final HRA only if the initial HRA shows that they are present (i.e., within the 1 per million isopleth for cancer risk or a hazard index isopleth of 0.1 for chronic non-cancer risk). However, the water body and pasture receptor information must be submitted with the ATEIP for all pastures and water bodies within the modeling domain in order to avoid delays in obtaining this information later during the HRA step in the AB 2588 process.

## 2.9 Revisions to ATEIP

If the ATEIP does not comply with the guidelines set forth in this document, it will be returned, with District comments, to the operator for revision. The District's ATEIP comment letter will include a deadline for submitting the revised ATEIP, and the District will specify if a Word document of the revised ATEIP is required with changes tracked. **Written responses to each District comment are required to be submitted with the revised ATEIP.**

## **3. Elements of the ATEIR**

### **3.1 Written Report**

**The ATEIR is not a reproduction of the ATEIP.** The ATEIR will include a **brief** written report (one to two pages) with stationary source information (described below in Section 3.1.1), reference to the District-approved ATEIP (with approval date), appendices of process data records (e.g., copies of pertinent annual report/compliance verification report data), purchase records (if applicable), source test results (if applicable) and any other necessary documentation. In addition, the electronic files will be attached (via DVD, CD or downloadable link) as an appendix. Include a PDF copy of the written report in the electronic files along with all emission calculations in Excel spreadsheets.

#### **3.1.1 Stationary Source Information**

Include the following information regarding the stationary source:

- Stationary source name
- Stationary source identification number (SSID)
- All FIDs and facility names associated with the stationary source
- Location (street address and UTM coordinates, including datum)
- Description of stationary source operations and a list of emitted substances, including a table of the total average annual and maximum hourly TAC emissions emitted from the stationary source

### **3.2 Emission Quantification**

Detailed emission calculation spreadsheets for both the average annual and maximum hourly emissions must be included with formulas, assumptions and parameters for all calculations. **Excel spreadsheets are required; Access database files will not be accepted.** Report the following information for each device in a spreadsheet format:

- Emission rates for each TAC, grouped by device and emitting source (if multiple devices are modeled in the same emitting source), including the following information:
  - HARP 2 Source ID and name
  - Device ID(s) and name(s)
  - TAC name and CAS number (without dashes, matching the HARP 2 CAS number format)
  - Emission factors for each TAC
  - Average annual emissions for each TAC
  - Maximum hourly emissions for each TAC
  - Emission control equipment and efficiency by device and TAC, if efficiency varies by TAC

Summarize emissions for the entire stationary source in the written report and Excel spreadsheet, and by device in a format required for HARP 2 (i.e., Emission Inventory data in a CSV file) as described in Section 5.A.2, *Emission Inventory*, of CARB's *User Manual for the Hotspots Analysis and Reporting Program Air Dispersion Modeling and Risk Assessment Tool Version 2* (13).

## **4. Required Forms**

The District does not require the forms described in Section VII.C, *Reporting Formats and Forms*, of the EICG Report (2). Instead, the data shall be submitted in the following formats: 1) Excel spreadsheets and HARP 2 files, as described in Section 1.2, *Purpose of the ATEIR*, of this document; 2) source information in the *Source Parameters Table* described in Section 2.3.1, *Source Parameters Table*, of this document; 3) building information in the *Building Parameters Table* described in Section 2.4, *Building Parameters – Modeling Protocol Table*, of this document; and 4) the receptors files in Lakes Environmental-compatible CSV format described in the receptors Section 2.7.6 through 2.7.9 of this document. Any additional information required that is not described in the above-referenced files shall be submitted in a transaction format for CEIDARS2.5 (14) or in the most current electronic format described in CARB’s EICG Report.

All ATEIPs and ATEIRs submitted to the District must be accompanied by a completed Air Toxics Certification Form-15c (15).

## **5. References**

- (1) California Air Resources Board. Accessed August 10, 2021. *AB 2588 Air Toxics “Hot Spots”*. <https://ww2.arb.ca.gov/our-work/programs/ab-2588-air-toxics-hot-spots>.
- (2) California Air Resources Board. Accessed August 10, 2021. *“Hot Spots” Inventory Guidelines*. <https://ww2.arb.ca.gov/our-work/programs/ab-2588-air-toxics-hot-spots/hot-spots-inventory-guidelines>.
- (3) Santa Barbara County Air Pollution Control District. March 17, 2005. *Rule 210 – Fees*. <https://www.ourair.org/wp-content/uploads/rule210.pdf>.
- (4) California Air Resources Board. Accessed August 10, 2021. *“Hot Spots” State Fees Categories & Costs*. <https://ww2.arb.ca.gov/hot-spots-state-fees-categories-costs>.
- (5) California Code of Regulations, Title 17, § 90700 – 90705. May 2001. *The Air Toxics “Hot Spots” Fee Regulation Sections 90700 – 90705*. <http://www.arb.ca.gov/regact/hotspots/01-02/appi.pdf>.
- (6) Murchision, Linda C. Letter received by Ed Romano on August 18, 1997. <https://www.arb.ca.gov/ab2588/portable.pdf>.
- (7) Santa Barbara County Air Pollution Control District. August 2021. *Approved Emission Factors for Toxic Air Contaminants*. <https://www.ourair.org/wp-content/uploads/SBCAPCD-Approved-Emission-Factors-for-TACs.pdf>.
- (8) Santa Barbara County Air Pollution Control District. August 2021. *Modeling Protocol Tables for ATEIP*. <https://www.ourair.org/wp-content/uploads/Modeling-Protocol-Tables-for-ATEIP-1.xlsx>.
- (9) Santa Barbara County Air Pollution Control District. June 2020. *Modeling Guidelines for Health Risk Assessments*. <https://www.ourair.org/wp-content/uploads/apcd-15i.pdf>.
- (10) Santa Barbara County Air Pollution Control District. August 2021. *SBCAPCD-Approved TAC Emission Factors.xlsx*. <https://www.ourair.org/wp-content/uploads/SBCAPCD-Approved-TAC-Emission-Factors.xlsx>.
- (11) California Air Resources Board. Accessed August 10, 2021. *HARP Digital Elevation Model Files*. <https://ww2.arb.ca.gov/resources/documents/harp-digital-elevation-model-files>.
- (12) Santa Barbara County Air Pollution Control District. Accessed August 10, 2021. *Meteorological Data*. <http://www.ourair.org/metdata/>.

- (13) California Air Resources Board. March 17, 2015. *User Manual for the Hotspots Analysis and Reporting Program Air Dispersion Modeling and Risk Assessment Tool Version 2*. <https://www.arb.ca.gov/toxics/harp/docs2/harp2admrtuserguide.pdf>.
- (14) California Air Resources Board. September 1, 2005. *California Emission Inventory Development and Reporting System 2.5 (CEIDARS2.5) Transaction Format*. <https://www.arb.ca.gov/app/emsinv/dist/doc/transfmt.pdf>.
- (15) Santa Barbara County Air Pollution Control District. December 31, 2020. *Air Toxics Certification Form-15c*. <https://www.ourair.org/wp-content/uploads/apcd-15c.pdf>.

# Appendix A – Example Toxics Air Contaminant Device Table

**AB2588 Substances to be Quantified for Year 2019 Toxics Emission Inventory**

APCD Device ID	Device Name	Acetaldehyde	Acrolein	Benzene	Chlorobenzene	p-Dichlorobenzene	Diesel Particulates	1,4-Dioxane	Ethylbenzene	Ethylene Glycol	Formaldehyde	Hexane	Hydrogen Chloride	Hydrogen Sulfide	Isopropanol	Metals <sup>a</sup>	Methanol	Methyl Ethyl Ketone	Naphthalene	PAHs	Propylene	Toluene	1,2,4-trimethylbenzene	Xylenes
012290	Heater Treater (H-201)	x	x	x						x	x				x				x	x	x	x		x
012289	Heater Treater (H-202)	x	x	x						x	x				x				x	x	x	x		x
012291	Heater Treater (H-203)	x	x	x						x	x				x				x	x	x	x		x
012285	Process Heater (H-204)	x	x	x						x	x				x				x	x	x	x		x
012288	Thermal Oxidizer (H-205)	x	x	x						x	x				x				x	x	x	x		x
012287	Thermal Oxidizer (H-206)	x	x	x						x	x				x				x	x	x	x		x
012286	Thermal Oxidizer (H-207)	x	x	x						x	x				x				x	x	x	x		x
01283	Oil Tank – Surge (TK-202)			x		x						x		x			x					x		
012677	Oil Tank – Surge (TK-203)			x								x		x								x		x
012284	Oil Tank – Reject (TK-204)			x								x		x								x		x
019782	Pig Receiver – Oil Emulsion			x					x			x										x		x
019779	Pig Receiver – Utility			x		x			x			x		x								x		x
109780	Pig Receiver – Produced Gas			x					x			x		x								x		x
109781	Pig Launcher – Seep Gas			x		x			x			x		x			x					x		x
10304, 109778	Sumps (S-202, S-203)			x					x			x		x								x		x
108022	Wash Tank (T-201)			x					x			x		x								x		x
108003, 109879	Loading Rack – LPG/NGL			x								x		x								x		
108002	Emulsion Brkr Tank (TK-101)								x						x		x						x	x
108004	Loading Rack – Em Brkr			x					x			x		x								x		x
various	Fugitive Components – G/LL			x		x			x			x		x				x				x		x
various	Fugitive Components – Oil			x		x			x			x		x				x				x		x
109129	Solvents Usage				x				x										x			x	x	x
109520, 109521	Coatings Usage - CHK				x				x									x	x			x	x	x
100312	Solvent Usage – Cut Test				x				x										x			x	x	x
106341	Degreasing/Cleaning Solvent				x				x										x			x	x	x
109010	IC Engine – em. gen.	x	x	x			x			x			x			x						x		x
108006	IC Engine	x	x	x			x			x			x			x						x		x
109381 109785	Chemical Bulk Tanks							x	x	x							x						x	x
109420	Methanol Tanks																x							
110031	Pig Cleaning				x				x										x			x	x	x

<sup>a</sup> Metals include antimony, arsenic, beryllium, cadmium, chromium (total and hexavalent), copper, lead, manganese, mercury, nickel, phosphorous, selenium, vanadium and zinc.



## Appendix B – ATEIP Checklist

- Emission calculation methodology for each type of emitting source:
  - Annual average emission rate.
  - Maximum hourly emission rates based on the maximum capacity, maximum throughput or maximum recorded hourly usage. Unless the device continually operates at maximum capacity, **the maximum hourly emissions are NOT equal to the annual emissions divided by the annual operating hours.**
- Requested deposit (if applicable)
- Form-15c
- Process flow diagram(s)
- Plot plan/aerial photo
- Copies of all references for toxic emission factors
- Justification for all submitted control efficiencies (e.g., source test report, manufacturer's guarantee)
- Safety Data Sheets (SDSs) for all solvents, coatings, abrasive blasting media, and welding rods used during the inventory year. Note: SDSs that do not contain toxics still must be submitted in order for the District to verify no toxics are present.
  - Table that lists the equipment/process that uses the SDS product.
  - SDSs are legible and searchable.
  - SDSs are grouped in folders by device (or similar organization strategy) for ease of review.
  - If range of weight fractions is provided, then the ATEIP clearly states that the maximum will be used. Alternatively, the ATEIP may state that manufacturer was contacted for specific value, along with documentation from manufacturer.
- If applicable: well workover emission calculation methodology and source parameters for oil & gas sources, or a clarification that no workover activities occurred during the inventory year
- If applicable: fugitive dust emission calculation methodology for haul roads at landfills and minerals facilities
- Device Operation Schedule Table* (see Section 2.3.2)
- TAC Device Table* (see Section 2.3.2)
- All text and tables are searchable in file (i.e., no images except for figures)
- Modeling Protocol Tables for ATEIP* and all associated information, including:
  - Attached copies of DEM files
  - Property boundary receptors in attached Lakes-compatible CSV file
  - If applicable: sensitive receptors in attached Lakes-compatible CSV file
  - If applicable: onsite receptors in attached Lakes-compatible CSV file (see Section 3.8.7 of Form-15i)
  - If applicable: variable emissions information in attached table **with documentation of schedule**
  - Documentation (e.g., manufacturer specifications, source test reports, photos/diagrams showing volume/area sources with written description explaining choice of parameters) of source parameters
  - Emission rates included on the *Source Parameters* tab for each Source ID

## Appendix C – ATEIR Checklist

- Brief written report (one to two pages)
- Summary of TAC emissions for each pollutant (summary by entire stationary source, not device):
  - Annual average emissions (lb/yr)
  - Maximum hourly emissions (lb/hr)
- If applicable: source test results
- Completed Form-15c
- Excel spreadsheet **with formulas for ALL calculations**
- Emissions by device in the HARP 2 format CSV file, as described in Section 5.A.2, *Emission Inventory*, of CARB's *User Manual for the Hotspots Analysis and Reporting Program Air Dispersion Modeling and Risk Assessment Tool Version 2*
- Copies of pertinent pages of annual report and/or compliance verification report
- If applicable: purchase records for solvents, coatings, abrasive blasting media, welding rods, and any other materials containing TACs