

## Rule 1200 Health Risk Assessment

Facility Name: Neurocrine Biosciences, Inc.  
Facility ID: APCD2022-SITE-04033  
Application: APCD2025-APP-008601  
Project Engineer: Victoria Burns  
Modeler: Bill Reeve  
Toxics Risk Analyst: Andrew Bernabe  
Date Completed by Toxics: 3/21/2025  
HRA Tools Used: Lakes-AERMOD (Version 24142)/HARP RAST (v22118)

The following estimated risks are valid only for the input data provided by the Project Engineer.

Estimated worker risk does not exceed the residential risk. Therefore, only residential risk is presented in the following results.

### **Estimated Risk Levels:**

Maximum Individual Cancer Risk (Resident) = 0.034 in one million

Chronic Noncancer Health Hazard Index (Resident) = 9.20E-06

8-Hour Noncancer Health Hazard Index (Worker) = N/A\*

Acute Health Hazard Index (\*\*PMI) = 0.13

\*8-Hour Non-Cancer Health Hazard Index is only applicable when calculating worker risk

\*\*Point of Maximum Impact

**The proposed application is for a stationary diesel emergency engine. The ARB Air Toxics Control Measure (ATCM) limits non-emergency operations to 50 hours per year.**

**Input Data Provided by Project Engineer:**

Type of Source: Emergency Diesel IC Engine.

Controls Description: None.

**Worst-Case TAC Emissions Increase:**

| <b>Toxic Air Contaminant</b>                          | <b>Hourly Emission Rate<br/>(lb/hr)</b> | <b>Annual Emission Rate<br/>(lb/yr)</b> |
|-------------------------------------------------------|-----------------------------------------|-----------------------------------------|
| DIESEL PARTICULATE                                    | N/A                                     | 1.66E+00                                |
| ACETALDEHYDE                                          | 5.55E-02                                | 2.78E+00                                |
| ACROLEIN                                              | 2.40E-03                                | 1.20E-01                                |
| ARSENIC COMPOUNDS                                     | 1.13E-04                                | 5.67E-03                                |
| BENZENE                                               | 1.32E-02                                | 6.60E-01                                |
| BUTADIENE, 1,3-                                       | 1.54E-02                                | 7.69E-01                                |
| CADMIUM AND COMPOUNDS                                 | 1.06E-04                                | 5.32E-03                                |
| CHLOROBENZENE                                         | 1.42E-05                                | 7.09E-04                                |
| CHROMIUM (HEXAVALENT)                                 | 7.09E-06                                | 3.55E-04                                |
| COPPER AND COMPOUNDS                                  | 2.91E-04                                | 1.45E-02                                |
| ETHYL BENZENE                                         | 7.73E-04                                | 3.86E-02                                |
| FORMALDEHYDE                                          | 1.22E-01                                | 6.12E+00                                |
| HEXANE-N                                              | 1.91E-03                                | 9.54E-02                                |
| HYDROCHLORIC ACID                                     | 1.32E-02                                | 6.60E-01                                |
| LEAD & COMPOUNDS                                      | 5.88E-04                                | 2.94E-02                                |
| MANGANESE AND COMPOUNDS                               | 2.20E-04                                | 1.10E-02                                |
| MERCURY AND COMPOUNDS                                 | 1.42E-04                                | 7.09E-03                                |
| NAPHTHALENE                                           | 1.40E-03                                | 6.98E-02                                |
| NICKEL AND NICKEL<br>COMPOUNDS                        | 2.77E-04                                | 1.38E-02                                |
| POLYCYCLIC AROM. HC (PAH)<br>[Treat as B(a)P for HRA] | 2.57E-03                                | 1.28E-01                                |
| PROPYLENE                                             | 3.31E-02                                | 1.66E+00                                |
| SELENIUM AND COMPOUNDS                                | 1.56E-04                                | 7.80E-03                                |
| TOLUENE                                               | 7.47E-03                                | 3.74E-01                                |
| XYLENES                                               | 3.01E-03                                | 1.50E-01                                |

Source: Acute TACs – Ventura County, 5/17/01.

Diesel particulate exhaust is a surrogate for all toxic air contaminant annual emissions from diesel-fueled engines when determining the potential cancer risk and noncancer chronic hazard index. Speciated toxic air contaminant hourly emissions are used when determining the potential noncancer acute hazard index.

**Process Data:**

| Operation Parameter                          | Value |
|----------------------------------------------|-------|
| Diesel particulate emission factor (g/hp-hr) | 0.01  |
| Engine horsepower (bhp)                      | 1494  |
| Fuel Consumption (gal/hr)                    | 70.9  |
| Annual hours of operation                    | 50    |

**Release Parameters:**

|                          |      |
|--------------------------|------|
| Stack Height (ft)        | 17.0 |
| Stack Diameter (ft)      | 1.33 |
| Temperature deg F        | 986  |
| Exhaust Flow Rate (acfm) | 7119 |

**Discussion**

The HRA was conducted in accordance with EPA and OEHHA guidance and District standard procedures. A point source was modeled with refined air dispersion modeling using EPA's AERMOD model, AERMET (Version 24142) processed Kearny Villa Road 2020/2022 ustar updated meteorology data, AERMAP terrain processing, and rural dispersion coefficients. Building downwash effects were calculated using the EPA BPIP-Prime model. The receptor grid was sufficiently dense to identify maximum impacts.

These risk results are based on the risk scenario calculations and health data at the time of the review, and should not be scaled with revised emissions rates without consulting with the Toxics Section.

## Cancer Risk

| INDEX | GRP1     | GRP2 | POLID | POLABBRE   | CONC     | RISK_SUM | SCENARIO DETAILS | INH_RISK |
|-------|----------|------|-------|------------|----------|----------|------------------|----------|
|       | 1 Engine |      | 9901  | DieselExhF | 4.60E-05 | 3.42E-08 | 30YrCance *      | 3.42E-08 |

## Chronic

| INDEX | GRP1     | GRP2 | POLID | POLABBRE   | CONC     | SCENARIO | RESP     |
|-------|----------|------|-------|------------|----------|----------|----------|
|       | 1 Engine |      | 9901  | DieselExhF | 4.60E-05 | NonCance | 9.20E-06 |
|       |          |      |       |            |          |          | 9.20E-06 |

## Acute

| INDEX | GRP1   | GRP2 | POLID    | POLABBRE   | CONC     | SCENARIO | EYE      |
|-------|--------|------|----------|------------|----------|----------|----------|
| 1     | Engine |      | 9901     | DieselExhF | 0        | NonCance | 0.00E+00 |
| 2     | Engine |      | 75070    | Acetaldehy | 3.07     | NonCance | 6.53E-03 |
| 3     | Engine |      | 107028   | Acrolein   | 0        | NonCance | 0.00E+00 |
| 4     | Engine |      | 7440382  | Arsenic    | 0.00628  | NonCance | 0.00E+00 |
| 5     | Engine |      | 71432    | Benzene    | 0.732    | NonCance | 0.00E+00 |
| 6     | Engine |      | 106990   | 1,3-Butadi | 0.852    | NonCance | 0.00E+00 |
| 7     | Engine |      | 7440439  | Cadmium    | 0.00589  | NonCance | 0.00E+00 |
| 8     | Engine |      | 108907   | Chloroben  | 0.000785 | NonCance | 0.00E+00 |
| 9     | Engine |      | 18540299 | Cr(VI)     | 0.000393 | NonCance | 0.00E+00 |
| 10    | Engine |      | 7440508  | Copper     | 0.0161   | NonCance | 0.00E+00 |
| 11    | Engine |      | 100414   | Ethyl Benz | 0.0428   | NonCance | 0.00E+00 |
| 12    | Engine |      | 50000    | Formaldeh  | 6.78     | NonCance | 1.23E-01 |
| 13    | Engine |      | 110543   | Hexane     | 0.106    | NonCance | 0.00E+00 |
| 14    | Engine |      | 7647010  | HCl        | 0.732    | NonCance | 3.49E-04 |
| 15    | Engine |      | 7439921  | Lead       | 0.0326   | NonCance | 0.00E+00 |
| 16    | Engine |      | 7439965  | Manganes   | 0.0122   | NonCance | 0.00E+00 |
| 17    | Engine |      | 7439976  | Mercury    | 0.00785  | NonCance | 0.00E+00 |
| 18    | Engine |      | 91203    | Naphthale  | 0.0774   | NonCance | 0.00E+00 |
| 19    | Engine |      | 7440020  | Nickel     | 0.0153   | NonCance | 0.00E+00 |
| 20    | Engine |      | 1151     | PAHs-w/o   | 0.142    | NonCance | 0.00E+00 |
| 21    | Engine |      | 115071   | Propylene  | 1.83     | NonCance | 0.00E+00 |
| 22    | Engine |      | 7782492  | Selenium   | 0.00864  | NonCance | 0.00E+00 |
| 23    | Engine |      | 108883   | Toluene    | 0.414    | NonCance | 8.28E-05 |
| 24    | Engine |      | 7664417  | NH3        | 0        | NonCance | 0.00E+00 |
| 25    | Engine |      | 1330207  | Xylenes    | 0.167    | NonCance | 7.59E-06 |
|       |        |      |          |            |          |          | 1.30E-01 |



231.17

271.66

357.97

415.90

PMI

439.61

418.76

424.69

261.94

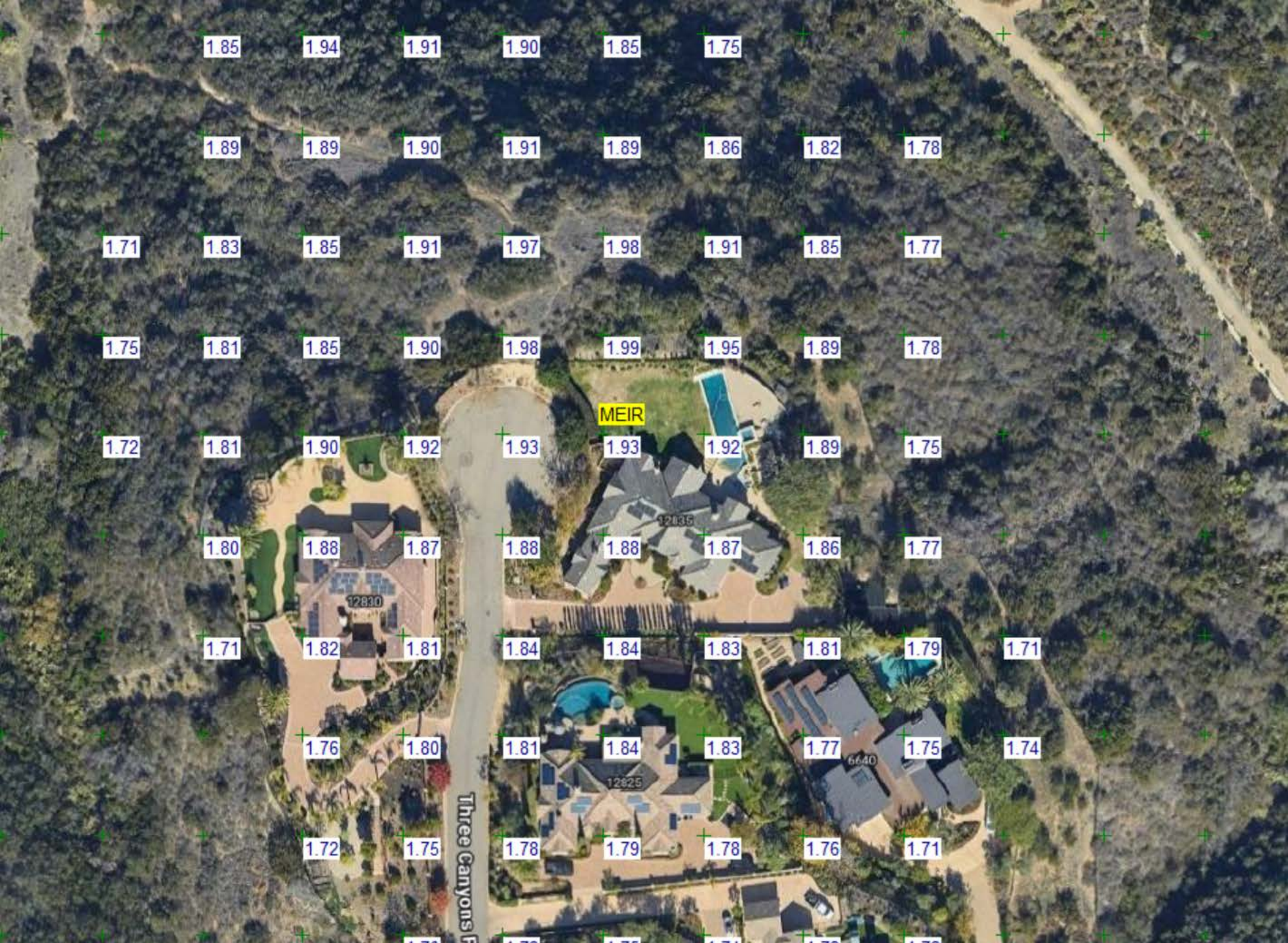
389.36

281.80

213.12

228.43

224.63



**FACILITY NAME:** Neurocrine Biosciences, Inc.

Fuel Consumption (gal/hr): 70.90

Diesel Particulate Emission Factor (g/hp-hr): 0.010071

Brake Horsepower (hp): 1494

Annual Hours of Operation (hrs): 50

FACILITY ID: APCD2022-SITE-04033

APPLICATION NO.: APCD2025-APP-008601

ENGINEER: VB

**RISK ANALYST ONLY**

**DISPERSION MODELING DATA**

Annual Receptor Type: Resident ▼

ANNUAL DISPERSION FACTOR (µg/m³)/(g/s): **1.9**

Distance (m):

Hourly Receptor Type: PMI ▼

HOURLY DISPERSION FACTOR (µg/m³)/(g/s): **439.6**

Distance (m):

| CHEMICAL NAME                                 | Emission<br>Factor<br><br>lb/1000 gal | Acute<br>Emission<br>Rate<br>lb/hr | Annual<br>Emission<br>Rate<br>lb/yr | Acute<br>Emissions<br>Rate<br>g/s | Annual<br>Emission<br>Rate<br>g/s | Hourly<br>GLC<br>µg/m³ | Annual<br>GLC<br>µg/m³ |
|-----------------------------------------------|---------------------------------------|------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|------------------------|------------------------|
| DIESEL PARTICULATE                            |                                       |                                    | 1.66E+00                            |                                   | 2.38E-05                          |                        | 4.60E-05               |
| ACETALDEHYDE                                  | 7.83E-01                              | 5.55E-02                           | 2.78E+00                            | 6.99E-03                          |                                   | 3.07E+00               |                        |
| ACROLEIN*                                     | 3.39E-02                              | 2.40E-03                           | 1.20E-01                            | 3.03E-04                          |                                   |                        |                        |
| ARSENIC COMPOUNDS                             | 1.60E-03                              | 1.13E-04                           | 5.67E-03                            | 1.43E-05                          |                                   | 6.28E-03               |                        |
| BENZENE                                       | 1.86E-01                              | 1.32E-02                           | 6.60E-01                            | 1.66E-03                          |                                   | 7.32E-01               |                        |
| BUTADIENE, 1,3-                               | 2.17E-01                              | 1.54E-02                           | 7.69E-01                            | 1.94E-03                          |                                   | 0.852186               |                        |
| CADMIUM AND COMPOUNDS                         | 1.50E-03                              | 1.06E-04                           | 5.32E-03                            | 1.34E-05                          |                                   | 5.89E-03               |                        |
| CHLOROBENZENE                                 | 2.00E-04                              | 1.42E-05                           | 7.09E-04                            | 1.79E-06                          |                                   | 7.85E-04               |                        |
| CHROMIUM (HEXAVALENT)                         | 1.00E-04                              | 7.09E-06                           | 3.55E-04                            | 8.93E-07                          |                                   | 3.93E-04               |                        |
| COPPER AND COMPOUNDS                          | 4.10E-03                              | 2.91E-04                           | 1.45E-02                            | 3.66E-05                          |                                   | 1.61E-02               |                        |
| ETHYL BENZENE                                 | 1.09E-02                              | 7.73E-04                           | 3.86E-02                            | 9.74E-05                          |                                   | 4.28E-02               |                        |
| FORMALDEHYDE                                  | 1.73E+00                              | 1.22E-01                           | 6.12E+00                            | 1.54E-02                          |                                   | 6.78E+00               |                        |
| HEXANE-N                                      | 2.69E-02                              | 1.91E-03                           | 9.54E-02                            | 2.40E-04                          |                                   | 1.06E-01               |                        |
| HYDROCHLORIC ACID                             | 1.86E-01                              | 1.32E-02                           | 6.60E-01                            | 1.66E-03                          |                                   | 7.32E-01               |                        |
| LEAD & COMPOUNDS                              | 8.30E-03                              | 5.88E-04                           | 2.94E-02                            | 7.41E-05                          |                                   | 3.26E-02               |                        |
| MANGANESE AND COMPOUNDS                       | 3.10E-03                              | 2.20E-04                           | 1.10E-02                            | 2.77E-05                          |                                   | 1.22E-02               |                        |
| MERCURY AND COMPOUNDS (INORGANIC)             | 2.00E-03                              | 1.42E-04                           | 7.09E-03                            | 1.79E-05                          |                                   | 7.85E-03               |                        |
| NAPHTHALENE                                   | 1.97E-02                              | 1.40E-03                           | 6.98E-02                            | 1.76E-04                          |                                   | 7.74E-02               |                        |
| NICKEL AND NICKEL COMPOUNDS                   | 3.90E-03                              | 2.77E-04                           | 1.38E-02                            | 3.48E-05                          |                                   | 1.53E-02               |                        |
| POLYCYCLIC AROM. HC (PAH) [Treat as B(a)P for | 3.62E-02                              | 2.57E-03                           | 1.28E-01                            | 3.23E-04                          |                                   | 1.42E-01               |                        |
| PROPYLENE                                     | 4.67E-01                              | 3.31E-02                           | 1.66E+00                            | 4.17E-03                          |                                   | 1.83E+00               |                        |
| SELENIUM AND COMPOUNDS                        | 2.20E-03                              | 1.56E-04                           | 7.80E-03                            | 1.97E-05                          |                                   | 8.64E-03               |                        |
| TOLUENE                                       | 1.05E-01                              | 7.47E-03                           | 3.74E-01                            | 9.42E-04                          |                                   | 4.14E-01               |                        |
| AMMONIA (only if SCR)                         |                                       |                                    |                                     |                                   |                                   |                        |                        |
| XYLENES                                       | 4.24E-02                              | 3.01E-03                           | 1.50E-01                            | 3.79E-04                          |                                   | 1.67E-01               |                        |

|                                   |                                                                          |               |                                    |
|-----------------------------------|--------------------------------------------------------------------------|---------------|------------------------------------|
| Facility Name:                    | Neurocrine Biosciences, Inc.                                             |               |                                    |
| Application Number:               | APCD2025-APP-008601      SCHOOLS NOTICE REQUIRED, MULTIPLE WITHIN 1 MILE |               |                                    |
| Site ID Number:                   | APCD2022-SITE-04033                                                      |               |                                    |
| Equipment Address:                | 6045 EDGEWOOD BEND COURT<br>SAN DIEGO, CA 92130                          |               |                                    |
| Contact Name:                     | ABE CUEVAS      PREPARER: PATRICK TAM                                    |               |                                    |
| Contact Title:                    | DIRECTOR OF FACILITIES                                                   |               |                                    |
| Contact Affiliation:              | Neurocrine Biosciences, Inc.                                             |               |                                    |
| Contact Number:                   | 6198055349                                                               |               |                                    |
| Contact E-Mail:                   | ACUEVAS@NEUROCRINE.COM                                                   |               |                                    |
| Project Engineer:                 | VB                                                                       |               |                                    |
|                                   |                                                                          |               |                                    |
| Make:                             | KOHLER                                                                   |               |                                    |
| Model:                            | KD27V12                                                                  |               |                                    |
| S/N:                              | TBD                                                                      |               |                                    |
| Fuel Type:                        | diesel                                                                   |               |                                    |
| BHP Rating:                       | 1494                                                                     | 1114.09396 KW |                                    |
| Model Year:                       | 2024                                                                     |               |                                    |
| Tier Level:                       | 2                                                                        |               |                                    |
| Engine Family Number:             | RLHAL45.0ESP                                                             |               |                                    |
| Device Driven:                    | KOHLER KD1000 1000 KW EMERGENCY GENERATOR                                |               |                                    |
|                                   | CONTROLLED:                                                              |               |                                    |
| NOx, g/BHP-hr:                    | 4.04                                                                     | 5.41          | g/kW-hr      0%                    |
| CO, g/BHP-hr:                     | 0.12                                                                     | 0.16          | g/kW-hr      80%                   |
| NMHC, g/BHP-hr:                   | 0.09                                                                     | 0.12          | g/kW-hr      70%                   |
| PM10, g/BHP-hr:                   | 0.01                                                                     | 0.01          | g/kW-hr      85%                   |
| NH3 Slip from SCR (yes/no)        | no                                                                       | 0             | ppm (default 10 ppm if applicable) |
|                                   |                                                                          |               |                                    |
| Fuel Usage, gal/hr:               | 70.9                                                                     |               |                                    |
| Operating Schedule, hrs/day:      | 18                                                                       |               |                                    |
| Operating Schedule, hrs/yr:       | 50                                                                       |               |                                    |
| Exhaust Flow Rate, cfm:           | 7119                                                                     |               |                                    |
| Exhaust Temperature, °F:          | 986                                                                      |               |                                    |
| Stack Height above ground, ft:    | 17                                                                       |               |                                    |
| Stack Diameter, ft:               | 1.33                                                                     |               |                                    |
|                                   |                                                                          |               |                                    |
| Nearest School, ft:               | 150 FT                                                                   |               |                                    |
| Residential Receptor, m:          | 25.00                                                                    |               | ft      450 FT                     |
| Occupational Receptor, m:         | 25.00                                                                    |               | ft      200 FT                     |
| Acute Receptor, m:                | 25.00                                                                    |               | ft      150 FT                     |
|                                   |                                                                          |               |                                    |
| Vertical Exhaust? (yes/no):       | YES                                                                      |               |                                    |
| Flapper Valve? (flapper/raincap): | FLAPPER                                                                  |               |                                    |
| Plot Plan? (yes/no):              | yes                                                                      |               |                                    |
| Flow Obstructions:                | no                                                                       |               |                                    |

NOx, g/BH      5.533

REDUCTIONS EPA-CERTIFIED (G/KW-HR)      EPA-CERTIFIED (G/BHP-HR)

5.41 4.034303

0.8 0.59657

0.41 0.305742

0.09 0.067114

BACKPRESSURE: 34.2" H2O

Non-carb verified (no TBACT)

JOHNSON MATTHEY s-dpf

JM-SDPF-7-H-CS-BITO-16/16-RT

DPF (wall-flow ceramic (non catalyzed) filter) /DOC

NON: DDI, ECM, TC, CAC

Filter Regeneration Technology

>> NO is converted to NO<sub>2</sub> over the DOC

>> NO<sub>2</sub> combusts the soot, regenerating the filter

NOx increase under state atcm?

Previous engine:

APCD2024-PTO-004891

APCD2022-APP-007264

**San Diego Air Pollution Control District  
Supplemental Application Information  
Rule 1200 Toxics Evaluation**

(ALL REQUESTED INFORMATION IS IMPORTANT - PLEASE FILL BLUE CELLS)

Facility Name: Neurocrine Biosciences, Inc.

Equipment Location: 6045 EDGEWOOD BEND COURT SAN DIEGO, CA 92130

Project Description: Emergency Diesel Engine

Control Equipment: None

Operating Schedule:

Hours per Day: 1

Weeks per Year: 50

Days per Week: 1

Days per Year: 50

**RELEASE POINT DATA**

How are the emissions from this project released into the outdoor air? (Check all that apply)

| Point Source                                              | Non-Point Source                                                                                                                                                |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> Exhaust Stack or Duct | <input type="checkbox"/> Passive Ventilation <input type="checkbox"/> Released through windows and/or roll-up doors <input type="checkbox"/> Fugitive Emissions |

Point Source

| Parameter                                     | Point Source #1 | Point Source #2 | Point Source #3 |
|-----------------------------------------------|-----------------|-----------------|-----------------|
| Height of release above ground (ft)           | 17.0            |                 |                 |
| Stack Diameter (or length x width) (ft)       | 1.33            |                 |                 |
| Exhaust Gas Temperature (°F) <sup>1</sup>     | 986             |                 |                 |
| Exhaust Gas Flow (ACFM)                       | 7119            |                 |                 |
| Direction of Flow <sup>2</sup>                | vertical        |                 |                 |
| Flow Obstruction <sup>3</sup>                 | no              |                 |                 |
| Distance to Nearest Property Line ( +/- 10ft) | 0.00            |                 |                 |

<sup>1</sup> Use "70 °F" or "Ambient" if unknown

<sup>2</sup> if "other" describe:

<sup>3</sup> if "other" describe:

**AERIAL MAP AND FACILITY PLOT PLAN** must be attached and labeled with **Release Point(s)** and **Building(s)**  
(includes facility and neighboring buildings within 5x the release height of a point source(s)).

| Parameter                         | Building A  | Building B | Building C |
|-----------------------------------|-------------|------------|------------|
| Point Source(s)                   | 1           |            |            |
| Point Source Location             | Adjacent to |            |            |
| Building Length (ft) (optional)   | 125         |            |            |
| Building Width (ft) (optional)    | 25          |            |            |
| Building Height above ground (ft) | 24          |            |            |

**San Diego APCD Use Only**

Additional Rule 1200 Submittal Information

|                   |           |                        |                     |
|-------------------|-----------|------------------------|---------------------|
| Submittal Date:   | 2/27/2025 | Site ID:               | APCD2022-SITE-04033 |
| Project Engineer: | VB        | Appl. Number(s):       | APCD2025-APP-008601 |
| Fees Collected:   |           | PTO No. (if existing): | NA                  |

HARP2 - HRACalc (dated 22118) 3/21/2025 2:22:59 PM - Output Log

GLCs loaded successfully  
Pollutants loaded successfully  
\*\*\*\*\*

#### RISK SCENARIO SETTINGS

Receptor Type: Resident  
Scenario: All  
Calculation Method: Derived

\*\*\*\*\*  
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25  
Total Exposure Duration: 30

Exposure Duration Bin Distribution  
3rd Trimester Bin: 0.25  
0<2 Years Bin: 2  
2<9 Years Bin: 0  
2<16 Years Bin: 14  
16<30 Years Bin: 14  
16 to 70 Years Bin: 0

\*\*\*\*\*  
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True  
Soil: True  
Dermal: True  
Mother's milk: True  
Water: False  
Fish: False  
Homegrown crops: False  
Beef: False

Dairy: False  
Pig: False  
Chicken: False  
Egg: False

\*\*\*\*\*  
INHALATION

Daily breathing rate: RMP

\*\*Worker Adjustment Factors\*\*  
Worker adjustment factors enabled: NO

\*\*Fraction at time at home\*\*  
3rd Trimester to 16 years: OFF  
16 years to 70 years: ON

\*\*\*\*\*  
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.05  
Soil mixing depth (m): 0.01  
Dermal climate: Warm

\*\*\*\*\*  
TIER 2 SETTINGS  
Tier2 not used.

\*\*\*\*\*

Calculating cancer risk  
Cancer risk saved to: C:\Users\abernabe\Desktop\8601 Neurocrine\Risk\MEIRCancerRisk.csv  
Calculating chronic risk  
Chronic risk saved to: C:\Users\abernabe\Desktop\8601 Neurocrine\Risk\MEIRNCChronicRisk.csv  
Calculating acute risk  
Acute risk saved to: C:\Users\abernabe\Desktop\8601 Neurocrine\Risk\MEIRNCAcuteRisk.csv  
HRA ran successfully

▲ \*\*\* AERMOD - VERSION 24142 \*\*\* \*\*\* D:\Modeling Projects\8601\_Nuerocrine\8601\_Nuerocrine.isc  
\*\*\* 03/18/25  
\*\*\* AERMET - VERSION 24142 \*\*\* \*\*\*  
\*\*\* 16:02:22

PAGE 1

\*\*\* MODELOPTs: RegDFAULT CONC ELEV RURAL SigA Data

\*\*\* MODEL SETUP OPTIONS SUMMARY \*\*\*

SO STARTING

\*\* Source Location \*\*

\*\* Source ID - Type - X Coord. - Y Coord. \*\*

LOCATION STCK1 POINT 482111.210 3646269.820 66.260

\*\* Source Parameters \*\*

SRCPARAM STCK1 1.0 5.182 803.150 26.0308969355036 0.405384

\*\* Model Options Selected:

- \* Model Uses Regulatory DEFAULT Options
- \* Model Is Setup For Calculation of Average CONCentration Values.
- \* NO GAS DEPOSITION Data Provided.
- \* NO PARTICLE DEPOSITION Data Provided.
- \* Model Uses NO DRY DEPLETION. DDPLETE = F
- \* Model Uses NO WET DEPLETION. WETDPLT = F
- \* Stack-tip Downwash.
- \* Model Accounts for ELEVated Terrain Effects.
- \* Use Calms Processing Routine.
- \* Use Missing Data Processing Routine.
- \* No Exponential Decay.
- \* Model Uses RURAL Dispersion Only.
- \* CCVR\_Sub - Meteorological data includes CCVR substitutions
- \* TEMP\_Sub - Meteorological data includes TEMP substitutions
- \* Model Assumes No FLAGPOLE Receptor Heights.
- \* The User Specified a Pollutant Type of: OTHER

\*\*Model Calculates 1 Short Term Average(s) of: 1-HR  
and Calculates PERIOD Averages

**\*\*This Run Includes:**      1 Source(s);      1 Source Group(s); and      22746 Receptor(s)

```
with:      1 POINT(s), including
           0 POINTCAP(s) and      0 POINTHOR(s)
and:      0 VOLUME source(s)
and:      0 AREA type source(s)
and:      0 LINE source(s)
and:      0 RLINE/RLINEXT source(s)
and:      0 OPENPIT source(s)
and:      0 BUOYANT LINE source(s) with a total of      0 line(s)
and:      0 SWPOINT source(s)
```

```
**Model Set To Continue RUNning After the Setup Testing.
```

\*\*The AERMET Input Meteorological Data Version Date: 24142

```
**Output Options Selected:
```

|               |                                                                    |
|---------------|--------------------------------------------------------------------|
| Model Outputs | Tables of PERIOD Averages by Receptor                              |
| Model Outputs | Tables of Highest Short Term Values by Receptor (RECTABLE Keyword) |
| Model Outputs | External File(s) of High Values for Plotting (PLOTFILE Keyword)    |
| Model Outputs | Separate Summary File of High Ranked Values (SUMMFILE Keyword)     |

**\*\*NOTE:** The Following Flags May Appear Following CONC Values:

- c for Calm Hours
- m for Missing Hours
- b for Both Calm and Missing Hours

```

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =    132.00 ;  Decay Coef. =    0.000    ;
Rot. Angle =      0.0
                  Emission Units = GRAMS/SEC                      ;  Emission Rate Unit Factor =
0.10000E+07
                  Output Units   = MICROGRAMS/M**3

```

**\*\*Approximate Storage Requirements of Model = 6.1 MB of RAM.**

```
**Input Runstream File:      aermod.inp
```

```
**Output Print File:      aermod.out
```

\*\*Detailed Error/Message File: 8601\_Nuerocrine.err

\*\*File for Summary of Results: 8601\_Nuerocrine.sum

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV RURAL SigA Data

\*\*\* METEOROLOGICAL DAYS SELECTED FOR PROCESSING \*\*\*  
(1=YES; 0=NO)

|                     |                     |                     |                     |         |
|---------------------|---------------------|---------------------|---------------------|---------|
| 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 |
| 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 |
| 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 |
| 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 |
| 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 |
| 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 |
| 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 |
| 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 |
| 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 |
| 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 1 1 1 1 1 1 | 1 1 1 1 |

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

\*\*\* UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES \*\*\*  
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,  
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 \*\*\* MODELOPTs: RegDFAULT CONC ELEV RURAL SigA Data

\*\*\* UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA \*\*\*

Surface file: C:\Users\breeve\OneDrive - County of San Diego\Meteorology Documents\AERMET File Met  
 Version: 24142  
 Profile file: C:\Users\breeve\OneDrive - County of San Diego\Meteorology Documents\AERMET File  
 Surface format: FREE  
 Profile format: FREE

Surface station no.: 93107 Upper air station no.: 3190  
 Name: UNKNOWN Name: UNKNOWN  
 Year: 2020 Year: 2020

First 24 hours of scalar data

| YR    | MO   | DY | JDY | HR | H0    | U*    | W*     | DT/DZ  | ZICNV | ZIMCH | M-O | LEN  | Z0   | BOWEN | ALBEDO | REF | WS   | WD | HT |
|-------|------|----|-----|----|-------|-------|--------|--------|-------|-------|-----|------|------|-------|--------|-----|------|----|----|
| REF   | TA   | HT |     |    |       |       |        |        |       |       |     |      |      |       |        |     |      |    |    |
| 20    | 01   | 01 | 1   | 01 | -10.8 | 0.101 | -9.000 | -9.000 | -999. | 77.   | 8.6 | 0.04 | 1.12 | 1.00  | 2.82   | 57. | 10.0 |    |    |
| 283.1 | 10.0 |    |     |    |       |       |        |        |       |       |     |      |      |       |        |     |      |    |    |
| 20    | 01   | 01 | 1   | 02 | -6.6  | 0.081 | -9.000 | -9.000 | -999. | 56.   | 7.2 | 0.06 | 1.12 | 1.00  | 2.06   | 73. | 10.0 |    |    |
| 282.6 | 10.0 |    |     |    |       |       |        |        |       |       |     |      |      |       |        |     |      |    |    |
| 20    | 01   | 01 | 1   | 03 | -7.6  | 0.085 | -9.000 | -9.000 | -999. | 60.   | 7.2 | 0.04 | 1.12 | 1.00  | 2.37   | 54. | 10.0 |    |    |
| 283.5 | 10.0 |    |     |    |       |       |        |        |       |       |     |      |      |       |        |     |      |    |    |
| 20    | 01   | 01 | 1   | 04 | -6.0  | 0.075 | -9.000 | -9.000 | -999. | 50.   | 6.4 | 0.04 | 1.12 | 1.00  | 2.10   | 59. | 10.0 |    |    |
| 283.0 | 10.0 |    |     |    |       |       |        |        |       |       |     |      |      |       |        |     |      |    |    |
| 20    | 01   | 01 | 1   | 05 | -9.1  | 0.095 | -9.000 | -9.000 | -999. | 70.   | 8.5 | 0.06 | 1.12 | 1.00  | 2.41   | 63. | 10.0 |    |    |
| 282.4 | 10.0 |    |     |    |       |       |        |        |       |       |     |      |      |       |        |     |      |    |    |

[illegible]

First hour of profile data

|    |    |    |    |        |   |      |      |         |        |        |        |
|----|----|----|----|--------|---|------|------|---------|--------|--------|--------|
| YR | MO | DY | HR | HEIGHT | F | WDIR | WSPD | AMB_TMP | sigmaA | sigmaW | sigmaV |
| 20 | 01 | 01 | 01 | 10.0   | 1 | 57.  | 2.82 | 283.2   | 6.0    | -99.00 | 0.29   |

F indicates top of profile (=1) or below (=0)

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV RURAL SigA Data

\*\*\* THE SUMMARY OF MAXIMUM PERIOD ( 26304 HRS) RESULTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*3 \*\*

| NETWORK<br>GROUP ID<br>GRID-ID | AVERAGE CONC         | RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)                  | OF TYPE |
|--------------------------------|----------------------|---------------------------------------------------------|---------|
| ALL                            | 1ST HIGHEST VALUE IS | 7.06773 AT ( 482016.79, 3646176.78, 65.71, 65.71, 0.00) | DC      |
|                                | 2ND HIGHEST VALUE IS | 6.99747 AT ( 482007.14, 3646174.89, 65.42, 65.42, 0.00) | DC      |
|                                | 3RD HIGHEST VALUE IS | 6.79831 AT ( 481997.48, 3646172.99, 65.48, 65.48, 0.00) | DC      |
|                                | 4TH HIGHEST VALUE IS | 6.79017 AT ( 482026.45, 3646178.68, 65.55, 65.55, 0.00) | DC      |
|                                | 5TH HIGHEST VALUE IS | 6.71914 AT ( 482204.00, 3646240.00, 67.50, 67.50, 0.00) | DC      |
|                                | 6TH HIGHEST VALUE IS | 6.69274 AT ( 482304.00, 3646160.00, 57.65, 82.06, 0.00) | DC      |
|                                | 7TH HIGHEST VALUE IS | 6.64697 AT ( 482284.00, 3646180.00, 56.68, 79.60, 0.00) | DC      |

|                       |              |            |             |        |        |       |    |
|-----------------------|--------------|------------|-------------|--------|--------|-------|----|
| 8TH HIGHEST VALUE IS  | 6.64007 AT ( | 482204.00, | 3646220.00, | 63.66, | 67.79, | 0.00) | DC |
| 9TH HIGHEST VALUE IS  | 6.61897 AT ( | 482184.00, | 3646220.00, | 65.69, | 67.66, | 0.00) | DC |
| 10TH HIGHEST VALUE IS | 6.59608 AT ( | 482284.00, | 3646160.00, | 57.16, | 81.89, | 0.00) | DC |

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
 GP = GRIDPOLR  
 DC = DISCCART  
 DP = DISCPOLR

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 \*\*\* MODELOPTs: RegDFAULT CONC ELEV RURAL SigA Data

\*\*\* THE SUMMARY OF HIGHEST 1-HR RESULTS \*\*\*

\*\* CONC OF OTHER IN MICROGRAMS/M\*\*3 \*\*

| GROUP ID | NETWORK                | AVERAGE CONC | DATE                   | RECEPTOR                      |
|----------|------------------------|--------------|------------------------|-------------------------------|
| ZFLAG)   | OF TYPE GRID-ID        | (YYMMDDHH)   | (XR, YR, ZELEV, ZHILL, |                               |
| ALL      | HIGH 1ST HIGH VALUE IS | 439.60576    | ON 22091010: AT (      | 482126.35, 3646204.14, 64.38, |
| 64.38,   | 0.00) DC               |              |                        |                               |

\*\*\* RECEPTOR TYPES: GC = GRIDCART  
 GP = GRIDPOLR

DC = DISCCART

DP = DISCPOLR

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\*\*\* MODELOPTs: RegDFAULT CONC ELEV RURAL SigA Data

\*\*\* Message Summary : AERMOD Model Execution \*\*\*

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)

A Total of 1 Warning Message(s)

A Total of 1415 Informational Message(s)

A Total of 26304 Hours Were Processed

A Total of 654 Calm Hours Identified

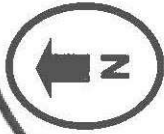
A Total of 761 Missing Hours Identified ( 2.89 Percent)

\*\*\*\*\* FATAL ERROR MESSAGES \*\*\*\*\*

\*\*\* NONE \*\*\*

\*\*\*\*\* WARNING MESSAGES \*\*\*\*\*

MX W403 99 PFLCNV: Turbulence data is being used w/o ADJ\_U\* option SigA Data



**Figure 1: Project Site Map**



Figure 2: Facility Plot Plan