
NOAA HYSPLIT Model Results for job 25792 (Real_Event)

A NOAA HYSPLIT model has been run internally for a Real Event with the following details:

Job ID: 25792 Job Start: Sun Jul 13 01:24:31 UTC 2025

Release: lat.: 36.217557 lon.: -112.065708 Hgt: 0.0 m

Pollutant: (7782-50-5) CHLORINE
Release Quantity: 612 kg Start: 25 07 12 23 0
Output: Maximum 15-minute Average Air Concentration
Dry Deposition rate: 0 cm/s Wet Removal: None #Part: 40000
Initial AEGL-3: 20 ppm AEGL-2: 2 ppm AEGL-1: 0.5 ppm
Meteorology: 2300Z 12 Jul 2025 - HRRR
Event: Real_Event - Hazmat_Industrial
Produced by user: valerie.meola - WFO: AZ: Flagstaff: 928-556-9409

A public link to this product has not been made available at this time.

For contact information select this forecast office from the list on the following National Weather Service web page:

https://www.noaa.gov/jetstream/wfos

This is an automated message, do not reply to this email.

Source Strength Summary

-- Release scenario is a nonflammable chemical that escaped from a tank as an aerosol.
-- Total amount released was 1350 pounds (612 kilograms).
-- Maximum average sustained release rate was 1350 pounds/minute (612 kilograms/minute), averaged over a minute or more.
-- Release duration was 1 minute.

This information summarizes key scenario details and ALOHA source strength calculations. Additional details about your scenario are displayed below.

Chemical Data

Chemical Name: CHLORINE
Molecular Weight: 70.9 g/mol
AEGL-1: 0.5 ppm
AEGL-2: 2 ppm
AEGL-3: 20 ppm
ERPG-1: 1 ppm
ERPG-2: 3 ppm
ERPG-3: 20 ppm
PAC-1: 0.5 ppm
PAC-2: 2 ppm
PAC-3: 20 ppm
IDLH: 10 ppm
LEL: data unavailable
UEL: data unavailable

Ambient Boiling Point: -40.4 degrees F (-40.2 degrees C)
Freezing Point: -149.9 degrees F (-101.0 degrees C)
Vapor Pressure at Ambient Temperature: greater than 1 atm
Ambient Saturation Concentration: 1,000,000 ppm or 100.0%

Weather and Location Data
Meteorology Forecast File: HRRR
Meteorology Forecast Cycle: 23 UTC / Jul 12, 2025
Release Start Time: 04:00 PM (MST) / July 12, 2025 (2300 UTC / July 12, 2025)
Release Location: (Lat: 36.217557; Lon: -112.065708)

The following information was extracted from the forecast file at the release start time in order to run ALOHA:
Wind: 10.5 miles per hour (4.7 meters per second) from SW
Ambient Air Temperature: 77.8 degrees F (25.5 degrees C)
Cloud Cover: 2 tenths
Stability Class: B

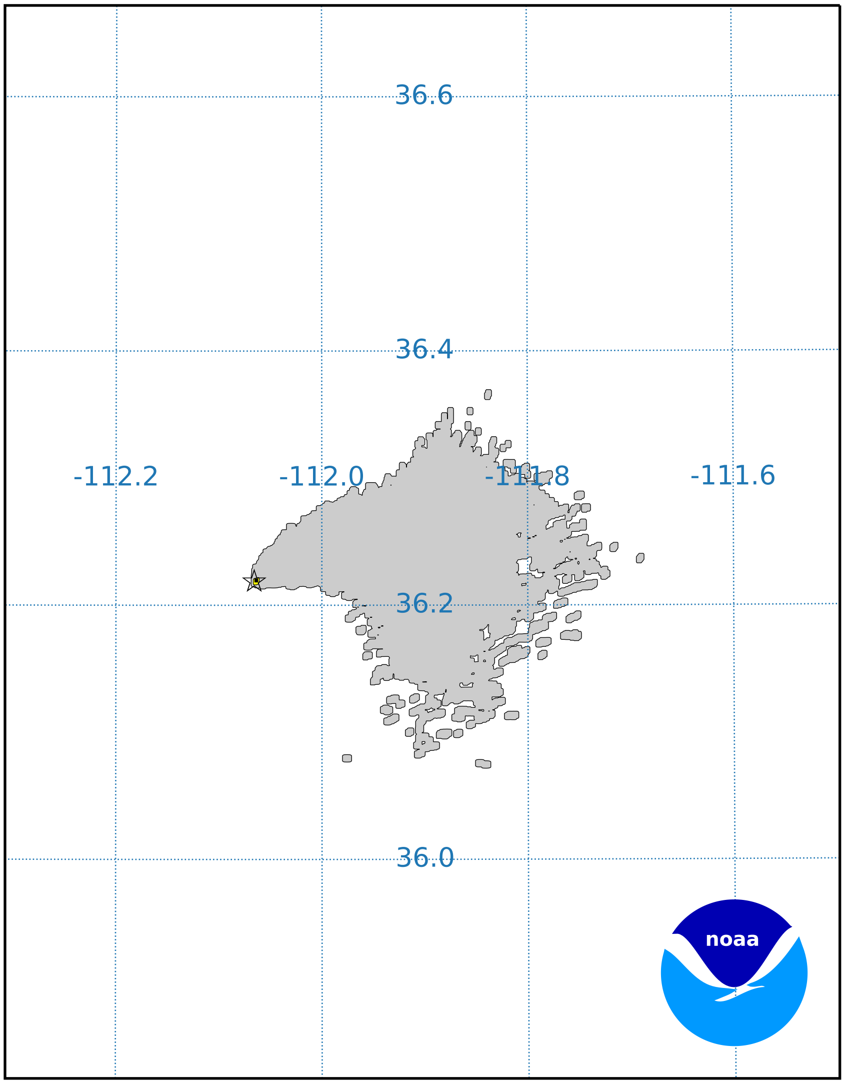
Tank Description
Tank Type: vertical cylinder
Tank Diameter: 10 feet
Tank Length: 4 feet
Tank Volume: 2,350 gallons (calculated)
Chemical Storage Temperature Inside of Tank: ambient air temperature (77.8 degrees F)

Mass of Volume in Tank
Mass Value Specified by: amount (mass) in tank
State of Chemical in Tank: tank contains liquid (calculated)
Mass of Chemical in Tank: 1,350 pounds

Tank Opening
Shape of Opening in Tank: circular opening
Opening Diameter: 12 inches
Leak Type: hole
Height of Leak: bottom of opening is 0 inches above the bottom of the tank

NOAA HYSPLIT MODEL
Concentration (*ppm*) averaged between 0 m and 50 m
Integrated from 1600 12 Jul to 1700 12 Jul 2025 (MST)
CHEM Release started at 1600 12 Jul 2025 (MST)

Source ☆ at 36.22 N 112.07 W from 0 m



Not for Public Dissemination

AEGL-3	>20.0 *ppm*
AEGL-2	>2.0 *ppm*
AEGL-1	>0.5 *ppm*
	>2.7e-06 *ppm*

Maximum: 1.2e+00 *ppm*

Minimum: 3.4e-06 *ppm*

ACUTE (SHORT-TERM) EFFECTS

AEGL-3	Life-threatening health effects possible
AEGL-2	Irreversible or other serious health effects that could impair the ability to take protective action.
AEGL-1	Mild, transient health effects.

HRRR METEOROLOGICAL DATA

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