

KEY TO FILES FOR DIGITAL RECORD SUPPORTING:

ConocoPhillips OCS Air Permit Application
Volume II
Air Quality Impact Analysis
Alaska Seaward Boundary Point of
Compliance

This digital record contains data files associated with the CALPUFF dispersion modeling AQIA supporting the Permit Application. This document describes the contents of the digital record.

The final ambient analysis document and WRF data model application and evaluation document are contained in the root directory of this digital record.

1.0 CALMET directory contains input files (*.inp), list files (*.lst), and output files (*.dat) for CALMET runs. Files for each month modeled, for each of the 3 years are included. Subdirectories include pre-processed files required by CALMET.

Buoy data contains CALMET-ready “virtual buoy” data files (*.dat) created from WRF data. The virtual buoy program (*.py) used to extract data from a single WRF node is also included.

Make Geo contains input files (*.inp), list files (*.lst), and output files (*.dat) as well as raw data files used the pre-processing program. Note that separate output files were created for July 2008/2009 to account for sea ice coverage within the modeling domain.

Landuse subfolder contains pre-processing of land-use data.

Terre subfolder contains pre-processing of terrain data as well as development of terrain elevations for inland receptors.

Surface Data contains input files (*.inp), list files (*.lst), and output files (*.dat) as well as raw data files (*.ish) used the pre-processing program.

Filled subfolder contains files used to process surface data with the “METFILL” program to fill missing data using USEPA procedures. Note that raw data in Integrated Surface Hourly Data (ISHD) format were converted to the more user-friendly Solar and Meteorological Surface Observation Network (SAMSON) format prior to running the filling program. Executable (*.exe) and source codes (*.for) are provided for both “METFILL” and “ISH_2_SAM”.

Upper Air Data contains pre-processing for 2 upper-air stations. Raw data (*.fsl) is the root of the directory, additional files are contained in subdirectories for each of the 3 model years.

MMEXTRCT subfolder contains input files (*.inp) and output file (*.dat) for the program used to extract data from a single WRF node to used to fill missing data for each upper air station. (Filling of data occurs within Read62 program). Note that the executable (*.exe) and source code (*.for) are provided in the “2007” directory only.

MM5_UP subfolder contains input files (*.inp), list files (*.lst), and output files (*.UP) for the program used to put the extracted WRF data into the correct format for use in READ62. Note that the executable (*.exe) and source code (*.for) are provided in the “2007” directory only.

Read62 subfolder contains input files (*.inp), list files (*.lst), and output files (*.UP) for the program used to fill and process the upper air data for use in CALPUFF.

WRF contains raw WRF data obtained from Alpine Geophysics for use in CALMET.

2.0 CALPUFF directory contains input files (*.inp), list files (*.lst), and output files (*.con) for model runs. Note that CALPUFF was run for each source separately at a unit emission rate (1 g/sec). Output concentrations for each source were later scaled by the actual emission rate in POSTUTIL.

Base Case & Base Case Cumulative subdirectories contain model run files used to assess the COP project-only impacts as well as cumulative air quality impacts.

Group1_TestA through **Group2_TestB2** subdirectories contain model run files associated with sensitivity testing.

3.0 POSTUTIL directory contains input files (*.inp), list files (*.lst), and output files (*.con) for post-processing runs for each CALPUFF case. POSTUTIL was used to scale CALPUFF runs by the actual emission rates and sum the impacts due to each source (run in CALPUFF separately).

4.0 CALPOST directory contains input files (*.inp), list files (*.lst), and plot files (*.dat) for CALPOST output processing runs for each CALPUFF case. Note that for 1-hour NO₂ and 1-hour SO₂, CALPOST Version 6 was used to compute the daily H4H and H8H statistics.

5.0 Executables directory contains models' executables.

Emission Rate and Stack Parameter Development directory contains summary tables for emissions and stack parameters.

Validated Regional Background Data directory contains monitor data for Point Lay and the Wainwright Permanent Station.

Vessel Layouts – FULL SIZE directory contains vessel drawings.