

**MILES CITY FIELD OFFICE**  
**Supplemental Air Quality Analysis**

**APPENDIX B**  
**DATA SET-UP**

## Appendix B CALMET User-Defined Fields

Variable	Description	Value
PMP	Map projection	LCC(Lambert Conformal) False Easting = 0.0 False Northing = 0.0 DATUM = WGS-84 <i>Reference Lat/Long:</i> RLAT0 = 44.75 N RLON0 = 107.00 W <i>Standard Parallels:</i> XLAT1 = 30.0 N XLAT2 = 60.0 N
NX, NY	No. X grid cells, No. Y grid cells	210, 180
DGRIDKM	Grid spacing (km)	4.0
XORIGKM	SOUTHWEST corner of grid cell (1,1) (km)	-420.0
YORIGKM	SOUTHWEST corner of grid cell (1,1) (km)	-360.0
NZ	Number of vertical layers	12
ZFACE	Vertical cell face heights (m)	0, 20, 40, 80, 120, 180, 260, 400, 600, 800, 1200, 2000, 3000
IEXTRP	Extrapolation of surface winds to upper layers	-4
RMAX1	Max surface over-land extrapolation radius (km)	20
RMAX2	Max aloft over-land extrapolation radius (km)	50
RMAX3	Maximum over-water extrapolation radius (km)	500
TERRAD	Radius of influence of terrain features (km)	10
R1	Relative weight at surface of Step 1 field and obs	10
R2	Relative weight aloft of Step 1 field and obs	25
ISURFT	Surface Station to use for surface temperature	Riverton Mun. Arpt, WY
IUPT	Station for lapse rates	Riverton, WY
I PROG	Gridded prognostic wind field – MM4/MM5 data	14

**CALPUFF User-Defined Fields**

<b>Variable</b>	<b>Description</b>	<b>Value</b>
NSPEC	Number of chemical species	9
NSE	Number of chemical species to be emitted	7
CSPECn	Names of Species	SO <sub>2</sub> , SO <sub>4</sub> , NO <sub>x</sub> , HNO <sub>3</sub> , NO <sub>3</sub> , PM <sub>10</sub> , PM <sub>2.5</sub> , EC, SOA
MCHEM	Chemical mechanism flag	1
MDISP	Method used to compute dispersion coefficients	3
PMAP	Map projection	same as CALMET
NX, NY	No. X grid cells, No. Y grid cells	210, 180
DGRIDKM	Grid spacing (km)	4.0
XORIGKM	SOUTHWEST corner of grid cell (1,1) (km)	-420.0
YORIGKM	SOUTHWEST corner of grid cell (1,1) (km)	-360.0
NZ	Number of vertical layers	12
ZFACE	Vertical cell face heights (m)	0, 20, 40, 80, 120, 180, 260, 400, 600, 800, 1200, 2000, 3000
IBCOMP	Southwest X-index of computational domain	1
JBCOMP	Southwest J-index of computational domain	1
IECOMP	Northeast X-index of computational domain	210
JECOMP	Northeast Y-index of computational domain	180
Dry Gas Dep	Chemical parameters of gaseous deposition	CALPUFF default
Dry Part. Dep	Chemical parameters of particle deposition	CALPUFF default
Wet Dep	Wet deposition parameters	CALPUFF default
MOZ	Ozone data input option	1
BCKO3	Monthly ozone concentrations (Used only if MCHEM = 1, 3, or 4 and MOZ = 0 or MOZ = 1 and all hourly O3 data missing) (ppb)	12*40.0
BCKNH3	Monthly ammonia concentrations (ppb)	12*5.0