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ATMOSPHERIC DYNAMICS, INC
Meteorological & Air Quality Modeling

Transmittal of MREC Modeling Data

To: Doug Davy, CH2M
From: Gregory Darvin, Atmospheric Dynamics, Inc.

The modeling CD, as provided to support the MREC AFC contains the following data:

MISSION ROCK MODELING FILES DECEMBER 2015

AERMOD and other modeling files are contained in ZIP files. Most Input files have the extension *.INP while most output files have the extension *.log/*.out/*.dat.

AERSURF.zip > Contains the AERSURFACE runs for the El Rio monitoring site as described in the Air Quality Modeling Analyses/Protocol.
>ELRIO1A.INP ELRIO1A.log ELRIO1A.out - Runs for average moisture
>ELRIO1D.INP ELRIO1D.log ELRIO1D.out - Runs for dry conditions
>ELRIO1W.INP ELRIO1W.log ELRIO1W.out - Runs for wet conditions
>Ojai-Precip.pdf - Ojai monthly precipitation (nearest complete 30+yr site)
>Ojai-Precip.xlsx - Spreadsheet to determine average/dry/wet months

AMAP-RegRecs.zip > Contains the AERMAP run for the original fenceline, downwash, intermediate, and coarse receptor grids as described in the Air Quality Modeling Analyses/Protocol - receptors are output to *.rcf file in AERMOD format with elevations & hill-slope factors.
>AMAPNED1.INP AMAPNED1.OUT AMAPNED1.rcf AMAPNED1.src - Fence/Downwash/Inter.
>AMAPNED2.INP AMAPNED2.OUT AMAPNED2.rcf - Coarse Receptor Grids
>NEDU74221090.tif - 10m NED file for Fence/Downwash/Inter & Refined Grids
>NED_92932945.tif - 30m NED file for Coarse & Sensitive Receptor Grids

AMAP-Refined.zip > Contains the AERMAP run for the refined receptor grid as described in the Air Quality Modeling Analyses/Protocol (many maximum facility impacts occur in the original intermediate/coarse grids areas).
>AMAPNED1R.INP AMAPNED1R.OUT AMAPNED1R.rcf

AMAP-SenRecs.zip > Contains the AERMAP run for the sensitive receptors.
>AMAPNED2SR4.INP AMAPNED2SR4.OUT AMAPNED2SR4.rcf

AMET-STG1.zip > Contains the AERMET Stage 1 runs - outputs used as input
to Stage 2 runs (log & output files not given since they can be recreated).
>elrio.zip - raw El Rio site data from Ventura County
>EL-RIO.txt - El Rio monitoring site data formatted for input to AERMET
>723926-23136.ish - Camarillo Airport hourly ASOS Data (supplements El Rio)
>raobVAN.txt - Radiosonde data from Vandenberg AFB
>ELRIO1a.INP - Stage 1 control file for 1/1/09-11/23/10 threshold=1.0m/s
>ELRIO1b.INP - Stage 1 control file for 11/23/10-1/5/12 threshold=0.5m/s
>ELRIO1c.INP - Stage 1 control file for 1/5/12-12/31/13 threshold=0.22m/s

AMET-STG2.zip > Contains the AERMET Stage 2 runs - outputs used as input
to Stage 3 runs (log files not given).
>ELRIO2a.INP - Stage 2 control file for 1/1/09-11/23/10 threshold=1.0m/s
>ELRIO2b.INP - Stage 2 control file for 11/23/10-1/5/12 threshold=0.5m/s
>ELRIO2c.INP - Stage 2 control file for 1/5/12-12/31/13 threshold=0.22m/s
>EL-RIOA.MRG - Stage 2 output data for 1/1/09-11/23/10 threshold=1.0m/s
>EL-RIOB.MRG - Stage 2 output data for 11/23/10-1/5/12 threshold=0.5m/s
>EL-RIOC.MRG - Stage 2 output data for 1/5/12-12/31/13 threshold=0.22m/s

AMET-STG3.zip > Contains the AERMET Stage 3 runs - outputs *.PFL and *.SFC
are the AERMOD met files (log files not given).
>ELRIO3a09.INP EL-RIOA09.PFL EL-RIOA09.SFC - 2009 files for threshold=1.0m/s
>ELRIO3a10.INP EL-RIOA10.PFL EL-RIOA10.SFC - 2010 files for threshold=1.0m/s
>ELRIO3b10.INP EL-RIOB10.PFL EL-RIOB10.SFC - 2010 files for threshold=0.5m/s
>ELRIO3b11.INP EL-RIOB11.PFL EL-RIOB11.SFC - 2011 files for threshold=0.5m/s
>ELRIO3b12.INP EL-RIOB12.PFL EL-RIOB12.SFC - 2012 files for threshold=0.5m/s
>ELRIO3c12.INP EL-RIOC12.PFL EL-RIOC12.SFC - 2012 files for threshold=0.22m/s
>ELRIO3c13.INP EL-RIOC13.PFL EL-RIOC13.SFC - 2013 files for threshold=0.22m/s
>EL-RIOA.PFL EL-RIOA.SFC - AERMET/AERMOD for 1/1/09-11/23/10 threshold=1.0m/s
>EL-RIOB.PFL EL-RIOB.SFC - AERMET/AERMOD for 11/23/10-1/5/12 threshold=0.5m/s
>EL-RIOC.PFL EL-RIOC.SFC - AERMET/AERMOD for 1/5/12-12/31/13 threshold=0.22m/s
>EL-RIO.PFL EL-RIO.SFC - AERMET/AERMOD for 2009-2013, final compilation

The AERMOD input files are *.INP, the output plot files are *.DAT, and the output files with the printed results are *.OUT

BPIP.zip > Contains the BPIP-PRIME run for the facility operational impacts
>MR-BPIPf.inp MR-BPIPf.out MR-BPIPf.sum

SCREEN.zip > 1-hour to 24-hour Screening with Unitized Emissions to Determine Worst-Case Facility Configurations for Normal Operations & Startup Conditions
>SCREEN6.INP SCREEN6.OUT - Regular Receptors
>SCREEN6R.INP SCREEN6R.OUT - Refined Receptor Grid
>SCREEN60.xlsx - Spreadsheet with Pollutant Emissions/Concentrations

CO-RegRecs.zip > Regular Receptors for CO/Normal Operations & Startup Conditions
>CO-01HR.INP CO-01HR.DAT CO-01HR.OUT - 1-hr CO CAAQS/NAAQS Max for Normal Ops
>CO-08HR.INP CO-08HR.DAT CO-08HR.OUT - 8-hr CO CAAQS/NAAQS Max for Normal Ops
>CO-01HRS.INP CO-01HRS.DAT CO-01HRS.OUT - 1-hr CO CAAQS/NAAQS Max for Startup
>CO-08HRS.INP CO-08HRS.DAT CO-08HRS.OUT - 8-hr CO CAAQS/NAAQS Max for Startup

CO-Refined.zip > Refined Grid Runs for CO/Normal Operations & Startup Conditions
>COR-01HR.INP COR-01HR.DAT COR-01HR.OUT - 1-hr CO CAAQS/NAAQS Max for Normal Ops
>COR-08HR.INP COR-08HR.DAT COR-08HR.OUT - 8-hr CO CAAQS/NAAQS Max for Normal Ops
>COR-01HRS.INP COR-01HRS.DAT COR-01HRS.OUT - 1-hr CO CAAQS/NAAQS Max for Startup
>COR-08HRS.INP COR-08HRS.DAT COR-08HRS.OUT - 8-hr CO CAAQS/NAAQS Max for Startup

CO-RegRecs-Commiss.zip > Regular Receptors for CO/Commissioning
>CO-01HRC.INP CO-01HRC.OUT - 1-hr CO CAAQS/NAAQS Max for Commissioning Phase 1
>CO-01HRD.INP CO-01HRD.OUT - 1-hr CO CAAQS/NAAQS Max for Commissioning Phase 2
>CO-08HRC.INP CO-08HRC.OUT - 8-hr CO CAAQS/NAAQS Max for Commissioning Phase 1
>CO-08HRD.INP CO-08HRD.OUT - 8-hr CO CAAQS/NAAQS Max for Commissioning Phase 2

CO-Refined-Commiss.zip > Refined Grid Runs for CO/Commissioning
>COR-01HRC.INP COR-01HRC.OUT - 1-hr CO CAAQS/NAAQS Max for Commissioning Phase 1
>COR-01HRD.INP COR-01HRD.OUT - 1-hr CO CAAQS/NAAQS Max for Commissioning Phase 2
>COR-08HRC.INP COR-08HRC.OUT - 8-hr CO CAAQS/NAAQS Max for Commissioning Phase 1
>COR-08HRD.INP COR-08HRD.OUT - 8-hr CO CAAQS/NAAQS Max for Commissioning Phase 2

NO2-RegRecs.zip > Regular Receptors for 1-hour NO2/ARM Impacts.
>NO2-01HRC.INP NO2-01HRC.DAT NO2-01HRC.OUT - NO2/ARM CAAQS Max - Normal.Ops
>NO2-01HRN.INP NO2-01HRN.OUT - NO2/ARM NAAQS for Normal Operations
NO2-01HRN1.DAT NO2-01HRN8.DAT w/ 5-yr Average of 1-hour Max's & 8th Highs
>NO2-01HRSC.INP NO2-01HRSC.DAT NO2-01HRSC.OUT - NO2/ARM CAAQS Max - Startup
>NO2-01HRSN.INP NO2-01HRSN.OUT - NO2/ARM NAAQS for Startup Conditions
NO2-01HRSN1.DAT NO2-01HRSN8.DAT w/ 5-yr Average of 1-hour Max's & 8th Highs

NO2-Refined.zip > Refined Grid for 1-hour NO2/ARM Impacts.
>NO2R-01HRC.INP NO2R-01HRC.DAT NO2R-01HRC.OUT - NO2/ARM CAAQS Max - Normal.Ops
>NO2R-01HRN.INP NO2R-01HRN.OUT - NO2/ARM NAAQS for Normal Operations
NO2R-01HRN1.DAT NO2R-01HRN8.DAT w/ 5-yr Average of 1-hour Max's & 8th Highs
>NO2R-01HRSC.INP NO2R-01HRSC.DAT NO2R-01HRSC.OUT - NO2/ARM CAAQS Max - Startup
>NO2R-01HRSN.INP NO2R-01HRSN.OUT - NO2/ARM NAAQS for Startup Conditions
NO2R-01HRSN1.DAT NO2R-01HRSN8.DAT w/ 5-yr Average of 1-hour Max's & 8th Highs

NO2-RegRecs-Ann.zip > Regular Receptors for Annual NO2/ARM Impacts.
>NO2-A09.INP NO2-A09.DAT NO2-A09.OUT - NO2/ARM for 2009 CAAQS/NAAQS
>NO2-A10.INP NO2-A10.DAT NO2-A10.OUT - NO2/ARM for 2010 CAAQS/NAAQS
>NO2-A11.INP NO2-A11.DAT NO2-A11.OUT - NO2/ARM for 2011 CAAQS/NAAQS
>NO2-A12.INP NO2-A12.DAT NO2-A12.OUT - NO2/ARM for 2012 CAAQS/NAAQS
>NO2-A13.INP NO2-A13.DAT NO2-A13.OUT - NO2/ARM for 2013 CAAQS/NAAQS

NO2-Refined-Ann.zip > Refined Grid for Annual NO2/ARM Impacts.
>NO2R-A09.INP NO2R-A09.DAT NO2R-A09.OUT - NO2/ARM for 2009 CAAQS/NAAQS
>NO2R-A10.INP NO2R-A10.DAT NO2R-A10.OUT - NO2/ARM for 2010 CAAQS/NAAQS
>NO2R-A11.INP NO2R-A11.DAT NO2R-A11.OUT - NO2/ARM for 2011 CAAQS/NAAQS
>NO2R-A12.INP NO2R-A12.DAT NO2R-A12.OUT - NO2/ARM for 2012 CAAQS/NAAQS
>NO2R-A13.INP NO2R-A13.DAT NO2R-A13.OUT - NO2/ARM for 2013 CAAQS/NAAQS

NO2-RegRecs-Commiss.zip > Regular Receptors for NO2/Commissioning, No analysis
for NAAQS due to short-term duration of commissioning activities (< 1 year
and <100 hours per Phase).
>NO2-01HRCC.INP NO2-01HRCC.OUT >1-hr NO2/ARM Screening for Worst-case Phase 1
>OLM-01HRCC.INP OLM-01HRCC.OUT >1-hr NO2/OLM for Commissioning Phase 1 CAAQS
>OLM-01HRDC.INP OLM-01HRDC.OUT >1-hr NO2/OLM for Commissioning Phase 2 CAAQS
(see CONSTRUCTION ZIP file for hourly ozone file)

NO2-Refined-Commiss.zip > Refined Grid for NO2/Commissioning, No analysis
for NAAQS due to short-term duration of commissioning activities (< 1 year
and <100 hours per Phase).
>NO2R-01HRCC.INP NO2R-01HRCC.OUT >1-hr NO2/ARM Screening for Worst-case Phase 1
>OLMR-01HRCC.INP OLMR-01HRCC.OUT >1-hr NO2/OLM for Commissioning Phase 1 CAAQS
>OLMR-01HRDC.INP OLMR-01HRDC.OUT >1-hr NO2/OLM for Commissioning Phase 2 CAAQS
(see CONSTRUCTION ZIP file for hourly ozone file)

PM-RegRecs.zip > Regular Receptors for 24-hour PM Impacts/Normal Operations
(Startup Emissions/Impacts will be less than for Normal Operations).
>PM10-24HR.INP PM10-24HR.OUT - PM10 for CAAQS/NAAQS
PM10-24HR1.DAT PM10-24HR2.DAT w/ 5-yr High and High Second-High
>PM25-24HR.INP PM25-24HR.OUT - PM2.5 for NAAQS
PM25-24HR1.DAT PM25-24HR8.DAT w/ 5-yr Average of 24-hour Max's & 8th Highs

PM-Refined.zip > Refined Grid for 24-hour PM Impacts/Normal Operations
(Startup Emissions/Impacts will be less than for Normal Operations).
>PM10R-24HR.INP PM10R-24HR.OUT - PM10 for CAAQS/NAAQS
PM10R-24HR1.DAT PM10R-24HR2.DAT w/ 5-yr High and High Second-High
>PM25R-24HR.INP PM25R-24HR.OUT - PM2.5 for NAAQS
PM25R-24HR1.DAT PM25R-24HR8.DAT w/ 5-yr Average of 24-hour Max's & 8th Highs

PM-RegRecs-Ann.zip > Regular Receptors for Annual PM Impacts.
>PM10-A09.INP PM10-A09.DAT PM10-A09.OUT - PM10/PM2.5-CAAQS for 2009
>PM10-A10.INP PM10-A10.DAT PM10-A10.OUT - PM10/PM2.5-CAAQS for 2010
>PM10-A11.INP PM10-A11.DAT PM10-A11.OUT - PM10/PM2.5-CAAQS for 2011
>PM10-A12.INP PM10-A12.DAT PM10-A12.OUT - PM10/PM2.5-CAAQS for 2012
>PM10-A13.INP PM10-A13.DAT PM10-A13.OUT - PM10/PM2.5-CAAQS for 2013
>PM25-ANN.INP PM25-ANN.DAT PM25-ANN.OUT - PM2.5-NAAQS for 5-Year Average

PM-Refined-Ann.zip > Refined Grid for Annual PM Impacts.
>PM10R-A09.INP PM10R-A09.DAT PM10R-A09.OUT - PM10/PM2.5-CAAQS for 2009
>PM10R-A10.INP PM10R-A10.DAT PM10R-A10.OUT - PM10/PM2.5-CAAQS for 2010
>PM10R-A11.INP PM10R-A11.DAT PM10R-A11.OUT - PM10/PM2.5-CAAQS for 2011
>PM10R-A12.INP PM10R-A12.DAT PM10R-A12.OUT - PM10/PM2.5-CAAQS for 2012
>PM10R-A13.INP PM10R-A13.DAT PM10R-A13.OUT - PM10/PM2.5-CAAQS for 2013
>PM25R-ANN.INP PM25R-ANN.DAT PM25R-ANN.OUT - PM2.5-NAAQS for 5-Year Average

PM-RegRecs-Commiss.zip > Regular Receptors for PM10/Commissioning Phase 2
(Phase 1 less than Normal Operations).
>PM10-24HRD.INP PM10-24HRD.OUT

PM-Refined-Commiss.zip > Refined Grid for PM10/Commissioning Phase 2
(Phase 1 less than Normal Operations).
>PM10R-24HRD.INP PM10R-24HRD.OUT

SO2-RegRecs.zip > Regular Receptors for SO2/Normal Operations
(Startup Emissions/Impacts will be less than for Normal Operations).
>SO2-01HRC.INP SO2-01HRC.DAT SO2-01HRC.OUT - 1-hour SO2 CAAQS - Maximum
>SO2-01HRN.INP SO2-01HRN.OUT - 1-hour SO2 NAAQS
SO2-01HRN1.DAT SO2-01HRN4.DAT w/ 5-yr Average of 1-hour Max's & 4th Highs
>SO2-03HR.INP SO2-03HR.OUT - 3-hour SO2 NAAQS
SO2-03HR1.DAT SO2-03HR2.DAT w/ 5-yr High and High Second-High
>SO2-24HR.INP SO2-24HR.OUT - 24-hour SO2 CAAQS/NAAQS
SO2-24HR1.DAT SO2-24HR2.DAT w/ 5-yr High and High Second-High

SO2-Refined.zip > Refined Receptor Grid for SO2/Normal Operations
(Startup Emissions/Impacts will be less than for Normal Operations).
>SO2R-01HRC.INP SO2R-01HRC.DAT SO2R-01HRC.OUT - 1-hour SO2 CAAQS - Maximum
>SO2R-01HRN.INP SO2R-01HRN.OUT - 1-hour SO2 NAAQS
SO2R-01HRN1.DAT SO2R-01HRN4.DAT w/ 5-yr Average of 1-hour Max's & 4th Highs
>SO2R-03HR.INP SO2R-03HR.OUT - 3-hour SO2 NAAQS
SO2R-03HR1.DAT SO2R-03HR2.DAT w/ 5-yr High and High Second-High
>SO2R-24HR.INP SO2R-24HR.OUT - 24-hour SO2 CAAQS/NAAQS
SO2R-24HR1.DAT SO2R-24HR2.DAT w/ 5-yr High and High Second-High

CONST.zip > Construction Impacts for PM Fugitives and NO2/CO/SO2/PM Combustion Srcs
(Impacts for NO2/CO/SO2 ratioed from PM Combustion Source Impacts)
>CONST.INP CONST.OUT - Short-term PM10/Combustion Impacts for both...
CON01C.DAT CON03C.DAT CON08C.DAT CON24C.DAT - Combustion Sources
CON24.DAT - and Combustion+Fugitive Sources
>CON24F.INP CON24F.DAT CON24F.OUT - 24-hr PM2.5 for Combustion+Fugitive Sources
>CONOLM.INP CONOLM.OUT - 1-hr NO2/OLM NAAQS Impacts
CONOLM1.DAT CONOLM8.DAT w/ 5-yr Average of 1-hour Max's & 8th Highs
>O3FIL.ASC - Hourly ozone file for OLM
>CONA09.INP CONA09.OUT - Annual 2009 PM10/Combustion Impacts for both...
CONA09C.DAT CONA09.DAT Combustion and Combustion+Fugitive Sources
>CONA10.INP CONA10.OUT - Annual 2010 PM10/Combustion Impacts for both...
CONA10C.DAT CONA10.DAT Combustion and Combustion+Fugitive Sources
>CONA11.INP CONA11.OUT - Annual 2011 PM10/Combustion Impacts for both...
CONA11C.DAT CONA11.DAT Combustion and Combustion+Fugitive Sources
>CONA12.INP CONA12.OUT - Annual 2012 PM10/Combustion Impacts for both...
CONA12C.DAT CONA12.DAT Combustion and Combustion+Fugitive Sources
>CONA13.INP CONA13.OUT - Annual 2013 PM10/Combustion Impacts for both...
CONA13C.DAT CONA13.DAT Combustion and Combustion+Fugitive Sources
>CONA09F.INP CONA09F.DAT CONA09F.OUT - Annual 2009 PM2.5 Combined Impacts
>CONA10F.INP CONA10F.DAT CONA10F.OUT - Annual 2010 PM2.5 Combined Impacts
>CONA11F.INP CONA11F.DAT CONA11F.OUT - Annual 2011 PM2.5 Combined Impacts
>CONA12F.INP CONA12F.DAT CONA12F.OUT - Annual 2012 PM2.5 Combined Impacts
>CONA13F.INP CONA13F.DAT CONA13F.OUT - Annual 2013 PM2.5 Combined Impacts
>CONST2r.xls - Spreadsheet calculates AERMOD inputs & ratios Combustion Impacts

DEPOS-RegRecs.zip > Regular Receptors for Tier 1 Deposition per NPS/NFWS/NFS
>N-Tier1.INP N-Tier1.DAT N-Tier1.OUT - Nitrogen Deposition
>P-Tier1.INP P-Tier1.DAT P-Tier1.OUT - Particulate Deposition

DEPOS-McGrath.zip > McGrath State Beach for Tier 1 Deposition per NPS/NFWS/NFS
>N-Tier1-Mc.INP N-Tier1-Mc.DAT N-Tier1-Mc.OUT - Nitrogen Deposition
>P-Tier1-Mc.INP P-Tier1-Mc.DAT P-Tier1-Mc.OUT - Particulate Deposition

FUMIG.zip > Inversion Breakup Fumigation Analyses w/ AERSCREEN
>ELRIO1A.out - AERSURFACE output used by AERSCREEN
>MR-BPIPt3.inp - BPIP-PRIME input for Turbine#3 only used by AERSCREEN
>MR-ASCRN1.inp MR-ASCRN1.log MR-ASCRN1.out - AERSCREEN for Turbine#3
>MR-BPIPfp.inp - BPIP-PRIME input for firepump only used by AERSCREEN
>MS-ASCRN2.inp MS-ASCRN2.log MS-ASCRN2.out - AERSCREEN shows no firepump fumig.
>T3-SCRN.INP T3-SCRN.OUT - AERMOD run for Turbine#3 w/ regular receptors
>T3R-SCRN.INP T3R-SCRN.OUT - AERMOD run for Turbine#3 w/ refined grid