

ARS Weekly Project Status Report
NPS Gaseous Pollutant Monitoring Program (GPMP)
NPS Contract No. C2350064024
February 14 – February 20, 2011

Upcoming Meetings/Events

1. **Plot Review** – A plot review to examine January 2011 data is currently scheduled for Wednesday, February 23, in Fort Collins. The BLM will participate in this plot review in order to review data from the Meeker (MEEK) and Rangely (RANG) stations.
2. **CASTNET Conference Call** – The next monthly CASTNET conference call is scheduled for 9:00 a.m. MDT on Wednesday, March 9. MACTEC will be the call leader for March.

New Items

1. **2B Technologies NO_x Analyzer** – During the week of February 14, ARS instructed the site operator at Yellowstone National Park - Old Faithful (YELL-OF) to configure the instrument to measure NO_x only, rather than switching between NO and NO_x. The instrument will operate under this configuration for a few weeks before being removed and sent to Lee Tarnay for use at Yosemite National Park (YOSE).

Active Items

1. **Monitoring History Database** – During the week of December 20, ARS created a draft Web interface for the Monitoring History Database. ARS forwarded the Web interface link to John Ray on January 21 for review and feedback. John Ray then provided feedback during the plot review that occurred on January 26. ARS will proceed with edits based upon this feedback and present the changes to John Ray for his review during the March plot review.
2. **Hawaii Volcanoes National Park (HAVO) SO₂ Monitoring Network** – ARS is currently polling each station within the HAVO SO₂ network hourly and importing the data into the ARS IMC database. The data are reviewed each morning on time series plots. ARS is also transferring the data daily to John Ray via FTP so he is also able to review the data. During the week of January 24, ARS completed updates to the SO₂ alert page and forwarded the files to Loren Antolik of the USGS, who will run the program on the dispatch computer. ARS is waiting to hear from Loren as to whether or not he was able to successfully run the program on the dispatch computer. John Faust will visit HAVO during the week of February 21 to service these stations.
3. **Plans for 2011 POMS** – Plans for the 2011 POMS season are underway.
 - The system that operated at Glacier National Park (GLAC) for the past two years was removed during the week of February 7; it will then be installed at Lyndon B. Johnson National Historical Park (LYJO) in Texas. The park would like the new system to be installed by early April.
 - The system that operated at Assateague Island National Seashore (ASIS) will be removed and will no longer operate at this location.
 - No POMS systems will operate at Rocky Mountain National Park (ROMO) this year.
 - Mojave National Preserve (MOJA) will operate with two 2B Technologies ozone analyzers.
 - Filter pack sampling will not occur at Carlsbad Caverns National Park (CAVE), Devil's Tower National Monument (DETO) or Dinosaur National Monument (DINO) during the 2011 season. Only Joshua Tree National Park - Pinto Wells (JOTR-PW) will operate a filter pack system this year.
 - All other locations that operated a POMS system last year will operate again this year.

4. **Joshua Tree National Park - Cottonwood Canyon (JOTR-CC) Visit** – ARS visited JOTR-CC during the week of January 10. A DustTrak unit was installed during this visit to monitor particulates. Since the visit, however, the DustTrak has been reporting incorrect values. Further problems with this station are documented elsewhere in this report. An additional follow-up site visit is scheduled for February 28.
5. **Data Calculation Methods for SO₂ and NO₂** – New calculation methods for SO₂ and NO₂ are required based upon new standards that were proposed in 2010. ARS reviewed these standards and developed new calculation methods for SO₂ and NO₂ based upon the new standards. During the week of February 7, ARS incorporated the new calculations into both the database and the request Web site.

Items to Address in the Future

1. **Grand Teton National Park (GRTE) Monitoring Station** – Monitoring equipment for GRTE was purchased by WDEQ and has arrived at ARS. ARS ordered the shelter, which arrived at ARS during the week of December 6. Due to construction restrictions during the winter, installation is likely to occur in the spring of 2011.
2. **Three State Study Pilot Project** – The Three State Ozone Study Committee is reviewing sites in south-central Utah for one of the EPA/USFS funded ozone stations. The state of Wyoming is looking to install VOC and methane/non-methane monitoring at its Wamsutter station. The NPS Data Request Web site may be used as an interior repository for study data (until a more comprehensive data warehouse is completed).
3. **Death Valley National Park (DEVA) Meteorological Tower** – In August, the park ordered a Glen Martin tower for installation by park staff. The park has received the tower. ARS will reinstall wind speed, wind direction, ambient temperature and relative humidity equipment during the next regularly-scheduled visit.
4. **Hawaii Volcanoes National Park (HAVO)** – ARS contacted the EPA during the week of December 20 to determine the possibility of uploading high-range SO₂ data from HAVO into AQS. A follow-up e-mail was sent during the week of January 3.
5. **Data Calculation Methods for O₃** – ARS and the NPS ARD will evaluate the need to change ozone standard calculations based upon the EPA’s final direction, which was originally expected in August of 2010 but is now expected in 2011.
6. **W126 Calculations in DataView** – A running calculation of daily W126 values will be programmed by ARS for implementation into DataView at Great Smoky Mountains National Park - Cades Cove (GRSM-CC).

Site Status Board Entries

1. Issues Resolved This Reporting Period:

<u>Site</u>	<u>Problem began</u>	<u>Parameters</u>	<u>Problem description</u>
YELL-OF	02/03/11	CO	Carbon monoxide analyzer response to nightly calibrations had been low; it shifted dramatically on 02/03/11. Site operator confirmed on 02/14/11 that calibrator was not outputting correct gas values, resulting in low precisions and spans. Site operator was instructed to cut power and restart calibrator; values then returned to normal. Analyzer was confirmed to have been operating properly.

2. Issues Unresolved This Reporting Period:

<u>Site</u>	<u>Problem began</u>	<u>Parameters</u>	<u>Problem description</u>
HAVO-OB	12/06/10	SO ₂	SO ₂ calibrations have been off following a site visit, during which a new datalogger was installed. After troubleshooting with site operator, there are no apparent reasons why this is occurring. Further troubleshooting will occur at upcoming SAM visit.
JOTR-CC	01/13/11	SOL	Solar values are off scale by a factor of ten, possibly due to a glitch in the datalogger program. Data can be corrected at ARS until glitch is addressed onsite by ARS, who will be visiting site the week of 02/28/11.
JOTR-CC	01/18/11	O ₃	Ozone analyzer down. Replacement was installed on 01/26/11, as troubleshooting with the onsite analyzer was unsuccessful. Replacement analyzer worked briefly, but stopped soon after installation. Further troubleshooting with site operator continues during each site visit, but the source of the problem is still unclear. ARS will visit site during the week of 02/28/11 and address problem. Onsite analyzer was returned to ARS.
JOTR-CC	01/12/11	PM ₁₀	DustTrak malfunctioning; values are not reasonable. ARS will visit site the week of 02/28/11 and address problem.
JOTR-PW	02/03/11	O ₃	2B ozone analyzer failing. A replacement was sent on 02/03/11 and will be installed on 02/22/11.
MACA	12/12/10	CO, NO, NO _y , SO ₂	Nightly gas calibrations are showing no flow, likely due to extremely cold weather causing a frozen gas line. Ambient flow is not affected and values appear to be normal. Site operator reported on 01/06/11 that nightly calibrations have elevated; zero valve was turned off. Freezing temperatures continue at the site. Further investigation of clogged gas lines and inlet connections occurred on 02/01/11; inlet tube was extended, but poor calibrations continued as the temperature dropped. Site operator then increased inlet tubing openings at the cross fitting on 02/15/11; ARS will closely monitor how calibrations respond.
MEEK	02/16/11	NO, NO ₂ , NO _x	Calibrations lower than usual following a site visit, possibly due to a leak after filter change. Site operator returned and confirmed that filter holders were tight. He did not run another calibration; if the next one appears low, troubleshooting will continue.
MORA	01/01/11	RNF	Rain gauge heater is not working.
PEFO	02/01/11	O ₃	Station temperature low. Site operator e-mailed on 02/03/11 to return to station and adjust thermostat.
PINN	11/24/09	RH	Relative humidity sensor has not exceeded 80% in some time. This is low for this site; the sensor may be malfunctioning.
PINN	02/15/11	ALL	Site operator reported that laptop could not find operating system, even after restart. Replacement sent on 02/16/11 for ARS to install at site visit, currently scheduled for the week of 02/21/11.

2. Issues Unresolved This Reporting Period (continued):

<u>Site</u>	<u>Problem began</u>	<u>Parameters</u>	<u>Problem description</u>
SHEN	07/28/08	SDWD, SWS, VWD, VWS	Wind speed values have been low ever since the sensor was changed from Climatronics to RM Young.
SHEN	01/04/11	RNF	Rain gauge bucket was very hot and mechanism inside was beginning to warp. Replacement sent the same day. Site operator reported on 01/18/11 that rain bucket was still very hot, even after replacing rain gauge on 01/11/11.
THRO	01/08/11	SDWD, VWD	Site operator reported on 01/11/11 that wind sensor tail was gone after recent ice storm on 01/08/11. Wind vane replacement sent the same day. It will remain onsite until installation by ARS during next SAM visit, currently scheduled for early May, as operator is unable to climb tower.
THRO	01/11/11	RNF	Site operator reported on 01/11/11 that rain gauge heater was not working. A refurbished rain gauge was sent, but the site operator requested that it be stored onsite until it can be installed by ARS at next SAM visit, which is currently scheduled for April.
YOSE-TD	01/26/11	FLW	Datalogger flow channel is fluctuating. After both a replacement MFC and controller were installed, it now appears to be either an issue with signal wiring or the datalogger channel. To investigate this, a new channel was programmed into the datalogger and new signal wiring was sent to be temporarily installed for further troubleshooting during the next site visit, which occurred on 02/01/11. Channels were adjusted to store minute data for comparison. ARS will closely monitor data to assess whether this is the source of the problem.
YOSE-TD	01/30/11	O ₃	Nightly ozone calibrations producing inconsistent results.

Site Visits (Visit <http://ard-request.air-resource.com/project/>. Click Calendar of Project Events.)

1. Sites Visited This Reporting Period: None.

2. Sites Scheduled to be Visited in February and March:

HAVO	02/21 to 02/25	John Faust	Routine twice-annual visit; system upgrade.
MEEK	02/22 to 02/23	Dave Beichley	Routine quarterly visit.
RANG	02/24 to 02/25	Dave Beichley	Routine quarterly visit.
PINN	02/24 to 02/26	Martin Valvur	Routine twice-annual visit.
LAVO	02/28 to 03/02	Martin Valvur	Routine twice-annual visit.
JOTR	02/28 to 03/02	John Faust	System upgrade follow-up visit.
ROMO	03/09 to 03/11	Kelly Blomme	Routine twice-annual visit.
CIRO	03/14 to 03/15	Kelly Blomme	POMS installation.
CRMO	03/15 to 03/16	Kelly Blomme	Routine twice-annual visit.
COLM	03/16 to 03/17	Kelly Blomme	Routine twice-annual visit.
DINO	03/17 to 03/18	Kelly Blomme	Routine twice-annual visit.
LYJO	03/28 to 03/29	Kelly Blomme	POMS installation.

Reports, Data Submittals, and Data Requests

1. **Reports:** (Visit <http://ard-request.air-resource.com/project/>. Click Site Visits or Project Reports).

- Twice-annual site visit reports uploaded to the GPMP Web site last week: None.
- The December monthly data report was completed and e-mailed on February 4.

2. **Data Submittals:** (Click [here](#) to link to Data Validation Progress Report)

- AQS hourly data through December 2010.
- AQS precision and accuracy data through 4th Quarter 2010.
- CASTNET hourly data submitted to MACTEC E&C through November 2010.

3. **Data Requests (Gaseous Monitoring Data Retrieval Web Site):**

ASIS	01/01/05 to 09/30/10	O ₃ 8HR_GT for O ₃ 8HR, Top 10 Value for O ₃ 8HR
CANY	01/01/08 to 12/31/10	O ₃ , O ₃ 8HR, RH, SOL, STP, TMP, VWD, VWS
COLM	04/01/09 to 12/31/10	BAT, O ₃ , O ₃ 8HR, RH, RNF, SDWD, SOL, STP, SWD, SWS, TMP
DINO	03/01/08 to 12/31/10	O ₃ , O ₃ 8HR, RH, SOL, STP, SWD, SWS
GRBA	03/01/08 to 11/01/10	Top 10 Value for O ₃ 8HR
GRCA – The Abyss	01/01/02 to 12/31/05	O ₃ 8HR, SOL, STP, TMP, VWD, VWS
GRSM – Clingman’s Dome	05/01/10 to 10/31/10	RNF, SWS
JOTR – Black Rock, Pinto Wells	10/01/93 to 12/31/10	FLW, O ₃ , O ₃ 8HR, SDWD, SWD, SWS, TMP, O ₃ 8HR_GT for O ₃ 8HR, Monthly Grid for SWD
MEVE	11/01/10 to 12/31/10	O ₃
PINN	12/30/88 to 01/30/11	O ₃ Attain for O ₃ 8HR, O ₃ 8HRMaxSum for O ₃ 8HR, Met Summary
ROMO – Long’s Peak, Trail Ridge	01/01/06 to 02/14/11	BAT, DTP, FLW, O ₃ , O ₃ 8HR, RH, SDWD, SOL, STP, SWD, SWS, TMP, VWD, VWS WET
SEKI – Ash Mountain, Lower Kaweah	12/31/09 to 12/30/10	O ₃ , O ₃ 8HR, PM _{2.5}
YELL – Water Tank	01/01/05 to 12/31/09	O ₃ , TMP
ZION	03/01/08 to 11/01/10	O ₃ , Monthly Grid for RNF, Rose Plot for O ₃ 8HR, Top 10 Value for O ₃ 8HR

Contract Information

There is no new contract information to report for this period.