01/15/09

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January 13, 2009

Elizabeth Braziel, Project Officer
Clean Air State/Tribal Operations Section, 6PD-S
U.S. EPA Region VI
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Dear Ms. Braziel,

Enclosed is the Cherokee Nation Environmental Programs - Inter-Tribal Environmental Council's (ITEC), FY09 First Quarter Report for the Clean Air grant (XA-96674301-0) (FY09). The Cherokee Nation's Accounting Department will forward the financial status reports. If you have any inquiries or need additional information, feel free to contact Ryan Callison at (918) 453-5093.

Sincerely,

Tom Elkins
Environmental Programs Administrator
Cherokee Nation Environmental Programs

CHEROKEE NATION - ITEC

Clean Air Act, Section 103 Grant
(XA-96674301-0 FY09)

FY09 First Quarter Report
10-1-08 thru 12-31-08

submitted to the

Clean Air Section
U.S. Environmental Protection Agency, Region VI

Dallas, Texas

for the

Inter-Tribal Environmental Council (ITEC)

prepared by the

Cherokee Nation
Environmental Programs
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CHEROKEE NATION - ITEC

Clean Air Act, Section 103 Grant
(XA-96674301-0 FY09)

FY09 First Quarter Report
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Grant Information

Quality Assurance Project Plan (QAPP) Dates:

Criteria:	Approved January 9, 2009
PM2.5:	Approved July 22nd, 2008
IMPROVE:	National Program Approved
CASTNet:	National Program Approved
Mercury:	National Program Approved
National Trends:	National Program Approved
Mercury Trends:	Under development
Toxics:	Approved January 17, 2008 Rev. Submitted in January 2009
CNEP QMP:	Approved May, 9th 2008

All QMP's and QAPPs are effective for one year from the approval date.

I. INTRODUCTION

ITEC Consortium

Through a Memorandum of Agreement signed in October of 1992, the Cherokee Nation has been delegated authority by the ITEC member tribes to serve as the "lead agency." As the lead agency for ITEC, the environmental programs office is committed to providing environmental management for U.S. EPA environmental grants.

II. TASKS, OBJECTIVES & OUTPUTS

Under the 2008 ambient air-monitoring grant, the primary tasks involve:

1) ambient air monitoring (O3, CO, NOx, NOy, SOx, PM2.5, PM10 & met parameters) at 5 sites; Tahlequah, Newkirk, Stilwell, Pryor, & Marble City
2) IMPROVE visibility monitoring (Newkirk)
3) CASTNet dry deposition monitoring (Stilwell)
4) NCORE trace gas monitoring (Stilwell)
5) Mercury Deposition Network (MDN); (Stilwell, Newkirk, and Pryor)
6) Mercury Trends Network (MTN); Speciated Mercury Sampling (Stilwell)
7) National Trends Network (NTN); (Stilwell)
8) Mobile particulate (continuous PM2.5 & PM10) monitoring for tribal areas
9) technical assistance to tribes (independent quarterly audits, data management, AQS support, criteria & PM2.5 technical support, source identifications, permit review, etc.)
10) Emissions inventory preparation, training, and IPP development
11) Network data management and analysis
12) CNEP training and staff development
13) Air toxics metals sampling and analysis
14) Tribal air monitoring grant objectives & priorities

III. MISCELLANEOUS

Task 1: Criteria Pollutants & Meteorological Ambient Air Monitoring

ITEC ambient air monitoring for the criteria pollutants and meteorological data is occurring at five shelter locations (Tahlequah, Newkirk, Pryor, Stilwell, & Marble City).

Cherokee Nation/ITEC monitoring shelters include the Tahlequah, Newkirk, Pryor, Marble City & Stilwell continuous sites. The following types of monitors are at each location, with the EPA AQS site identifiers in parenthesis.

Tahlequah Shelter (40-021-9002):
Ozone, PM10, SOx, NOx, CO & meteorological equipment

Newkirk Shelter (IMPROVE) (40-071-9010):
Ozone, PM10, SOx, NOy, CO, mercury deposition network (MDN) & meteorological equipment

Pryor Shelter (40-097-9014):
Ozone, PM10, PM2.5FDMS, NOy, NOx, SOx, Metals, & meteorological equipment

Stilwell Shelter (CASTNet) (40-001-9009):
Ozone, NOy, CASTNet dry deposition filter pack, mercury deposition network (MDN), national trends network (NTN), meteorological equipment, and continuous & non-continuous ammonia sampling.

Marble City Shelter (40-135-9015):
Ozone, PM2.5, PM10, NOx, PM2.5 (2) & meteorological equipment

AQS data submittal is on schedule with data updates to the system every quarter including corresponding precision and accuracy data for all of the criteria pollutant monitors.

Continuous data from all sites is being uploaded to EPA's AirNow System every hour.

CNEP currently operates a collocated pair of PM2.5 samplers atop the Marble City shelter.

A network review was conducted and recommendations were made to discontinue SO2 and CO sampling at the Tahlequah and Newkirk locations.

Task 2: IMPROVE Monitoring

IMPROVE sampling is ongoing with sample collection every Tuesday. Data recovery has been excellent with few equipment/mechanical problems. The IMPROVE sample modules are collocated with the Newkirk Shelter. U.C. Davis continues to provide technical support and maintenance for all IMPROVE sample modules. All IMPROVE data continues to be loaded into the VIEWS database.

The CENRAP RPO Policy Oversight Group (POG) has agreed to continue funding this site through FY09.

Note: The CNEP-ITEC grant ***does not*** cover any chemical analysis, supplies, or maintenance items of this project. These are exclusively paid for through the CENRAP RPO. The ITEC grant provides minimal staff support to change out filters every Tuesday.

CNEP IMPROVE data and reports are available at:
http://vista.cira.colostate.edu/IMPROVE/Data/IMPROVE/improve_data.htm

EPA and CENRAP are working to ensure funding of the IMPROVE site through 9/09.

Task 3: CASTNet monitoring

CASTNet dry deposition sampling is ongoing with sample collection every Tuesday. Data recovery has been good with few equipment/mechanical problems. Annual CASTNet reports are provided to EPA R6 and CNEP via EPA contractor MacTec.

A continuous ammonia analyzer continues collecting hourly averages of ambient ammonia.

Task 4: NCORE Trace Gas Monitoring

The CNEP NCORE monitoring station is fully operational. Current equipment includes: trace CO, SO2, NOy, and a non-trace NOx. Other equipment includes digital datalogging capabilities, zero air source, and calibration devices.

CNEP is currently installing a MetOne PM2.5 FEM beta attenuation analyzer.

A PM Coarse sampling station has been installed atop the NCORE building. CNEP is utilizing two R&P 2025 FRM samplers for filter based PM Coarse measurements with the PM2.5 and PM10 difference method. PMC sampling began in December 2008.

CNEP continues to work with EPA Region 6 on obtaining other suggested/required NCORE monitoring parameters outlined in the OAQPS "NCORE Self-Assessment schedule".

Continuous data from the NCORE site is uploaded to EPA's AirNow System every hour.

Task 5: Mercury Deposition Network (MDN) Monitoring

Mercury Deposition Network (MDN) wet deposition samplers have been in operation at the CASTNet site (OK99) since March 1, 2003 and the Newkirk shelter (OK15) since March 1, 2005. Data collection and recovery has been excellent. Little or no problems have occurred with the sampling apparatus.

Illinois State University performs quarterly inspections, audits, and calibrations on both MDN sites through contract.

CNEP has installed an additional MDN site at Pryor Oklahoma. The site ID is OK19. Sampling will begin on March 1st 2009. This will be CNEP's 3rd MDN

Calendar year data summaries are available in July for the previous calendar year.

Site specific MDN data reports and yearly summaries are available at the following website:
http://nadp.sws.uiuc.edu/sites/siteinfo.asp?id=OK15&net=MDN
http://nadp.sws.uiuc.edu/sites/siteinfo.asp?id=OK99&net=MDN
http://nadp.sws.uiuc.edu/sites/siteinfo.asp?id=OK19&net=MDN

Task 6: Mercury Trends Network (MTN) Monitoring

EPA Clean Air Markets Division donated a Tekran Mercury Analyzer to CNEP in FY08. It was installed to compliment the Stilwell NCORE monitoring station and be collocated with the current onsite Mercury Deposition Network (MDN) sampling operations.

The CNEP MTN monitoring station has an automated system utilizing a Tekran model 2537A analyzer with model 1130 and 1135 speciation units. The mercury detector consists of a Cold Vapor Atomic Fluorescence Spectrometer (CVAFS). The system includes a quartz annular denuder, quartz particulate-filter, and gold traps. This system runs automatically and produces 5-minute integrated atmospheric dry mercury (Hg0) values while collecting reactive gaseous phase mercury (RGM) and particulate bound mercury (PHg) over a 3-hour integration period. RGM and PHg values are generated every 4 hours (i.e., 6 values per day). The system is connected to a computer for data archive, telemetry and remote checking of instrument status at the CNEP offices.

The atmospheric dry mercury analyzer went online October 20th, 2008.
The RGM and PHg insruments are scheduled to be online February 2009.

Task 7: National Trends Network (NTN) Monitoring

The Stilwell NTN sampler is operational with weekly precipitation samples being collected every Tuesday. Sampling began on 5/22/07.

Stilwell OK99 site data reports and yearly summaries are available at the following website:
http://nadp.sws.uiuc.edu/sites/siteinfo.asp?id=OK99&net=NTN

Task 8: Mobile Particulate Monitoring

Cherokee Nation has developed a mobile particulate monitoring program. The mobile particulate monitoring station consists of a PM2.5 TEOM and a PM10 TEOM. The unit has

onsite meteorological monitoring capabilities. Each tribe must sign a memorandum of agreement (MOA) which is to be agreed upon by both parties when the mobile shelter is deployed.

The first monitoring project began at the Taos Pueblo the week of July 17th 2006 and the last sample day at this site was March 26th 2007. All data has been loaded into AQS for this site. Data analysis reports have been provided to the tribe and EPA R6.
The second monitoring project began at the Mescalero Apache tribe the week of March 26th 2007 and ended November 9th 2007. All data has been loaded into AQS for this project. Data analysis reports have been provided to the tribe and EPA R6.

The third monitoring project began at the Ysleta Del Sur Pueblo in El Paso the week of November 12th 2007 and ended on October 28th 2008.

The fourth and current mobile monitoring location is Fort Gibson Oklahoma in Cherokee Nation tribal jurisdiction. Sampling is scheduled to begin in February 2009.

Each monitoring location meets EPA approved siting criteria for continuous PM monitoring.

All data is entered into AQS per EPA's 90 day requirement. The mobile monitoring station also submits real-time data to EPA's AirNow system.

Task 9: Technical Assistance to Tribes

ITEC continues to provide technical support for all tribes that have assumed monitoring activities and developed individual programs. Assistance is provided through monitor maintenance, quarterly audits, calibrations, troubleshooting, QAPP review, and AQS data entry.

ITEC continues to provide independent equipment audits for the following tribes: Jemez Pueblo, Quapaw Tribe, Sac & Fox Nation, and Delaware Nation. Following each audit a detailed audit report is prepared for each tribe within 30 days of the audit.

Task 10: EI Preparation, Training, and IPP Development

CNEP staff have identified training to assist in the future development of a tribal EI.

CNEP staff have committed to attend the following trainings:

EI Training at EPA Region 6 Air Meeting; March 24-27th, 2009; Austin, Texas
EPA's 18th Annual International EI Conference; March-April 2009; Baltimore, MD.
EI/TEISS Training (ITEP); June 16-19; Las Vegas, NV.
Intro to EI's (EPA Online); at employee's convenience
Intro to TEISS (ITEP Online); at employee's convenience

Task 11: Monitoring Network Data Management and Analysis

CNEP staff reviews all NAAQS data submitted to AQS for accuracy and compliance purposes. Each review details data completeness, P&A requirements, and NAAQS violations if any.

A network review of all filter based PM sampling has been conducted and shared with EPA R6. With the exception of the Marble City PM2.5 and NCORE PM Coarse samplers, all filter based PM2.5 sampling in Oklahoma and New Mexico has been discontinued.

CNEP staff has reviewed most CO and SO2 gaseous monitoring data within the current network. CO and SO2 sampling operations will be discontinued at the Tahlequah and Newkirk sites.

Task 12: CNEP Professional Training and Development
(trainings, workgroups, conferences, and related meetings)

ITEP Tribal Air Monitoring Support (TAMS) Steering Committee Meeting – Ryan
EPA PM2.5 Speciation (IMPROVE-CSN) Training – Dallas, TX. – Kent, April, & Ryan
EPA Region 6 Tribal Summit – Staff
USGS TEKRAN Mercury Analyzer setup visit & training – Larry
ODEQ Ozone NAAQS Meeting – Kent, April, & Ryan
NAU-ITEP "Advanced Air Quality Management Course" – Tahlequah, OK. - Staff

Task 13: Air Toxics Metals Sampling and Analysis

CNEP has obtained the necessary Tisch Environmental metals sampling equipment, set it up on site, and has performed all necessary calibrations.

SOPs have been developed for metals sample collection and for flow verification, calibration, and maintenance of sampling equipment

The CNEP toxics QAPP has been revised to include metals sampling. Revisions have been mailed to EPA.

Collected first 5 metals samples in December and sent them to ERG for analysis. Samples are collected on a 1 in 6 day schedule. Sampling began December 2nd 2008.

Task 14: Tribal Air Monitoring Grant Objectives & Priorities

Where applicable the CNEP air program has ensured the following air monitoring grant priorities have been achieved:

PRIORITY 1: Produce quality data and submit updated Quality Management Plan and Quality Assurance Project Plans to EPA Region 6 annually.
OUTPUT: *QMP and QAPPs*
TIMEFRAME: *Annual update one year after approval date.*

PRIORITY 2: Operate and report data from ambient air monitor networks into the EPA Air Quality System. Each site parameter should have 75% data return for each quarter.
OUTPUT: *AQS*
TIMEFRAME: *Quarterly, no later than 90 days after the end of the calendar quarter.*

PRIORITY 3: Notify EPA Region 6 of any situation (such as monitor malfunction or data validation issue) that results in the loss of more than two consecutive PM-2.5 or PM-10 sampling days or the loss of 120 consecutive hours of any continuous data. Identify the corrective action taken to minimize the loss of data.
OUTPUT: *Letter*
TIMEFRAME: *As soon as possible, but no more than 14 days after the event.*

PRIORITY 4: Notify EPA-R6 (6PD-Q) prior to establishing, modifying, relocating, or discontinuing any air monitor and/or site.
OUTPUT: *Letter to EPA-R6*
TIMEFRAME: *30 days prior to change*

PRIORITY 5: Conduct ambient air monitoring network reviews. Conduct analyses of data to aid in program development/assessment/evaluation.
OUTPUT: *Letter*
TIMEFRAME: *Annually*

PRIORITY 6: Certify all 2008 ambient data and quality assurance data in the Air Quality System (AQS) are complete and accurate.
OUTPUT: *Data certification letter with appropriate AQS AMP reports.*
TIMEFRAME: *July 1, 2009*

PRIORITY 7: Actively support and deliver PM-2.5 continuous data into AIRNow.
OUTPUT: *AIRNow*
TIMEFRAME: *Present target data delivery is 10 minutes.*

PRIORITY 8: Actively support and deliver PM-10 continuous data into AIRNow.
OUTPUT: *AIRNow*
TIMEFRAME: *Present target data delivery is 10 minutes.*

PRIORITY 9: Actively support and deliver ozone data into EPA's AIRNow.
OUTPUT: *AIRNow*
TIMEFRAME: *Daily*

III. MISCELLANEOUS

April Hathcoat and Kent Curtis participate in the CENRAP monitoring workgroup.

CNEP staff participate in the monthly EPA/States/Tribes air monitoring conference calls.

Ryan Callison was selected by the TAMS steering committee to the National Air Monitoring Committee headed up by EPA RTP (NACA Monitoring Committee).

Cherokee Nation is awaiting Clean Air Treatment as State (TAS) approval from EPA.

Ryan Callison participates in activities on the Clean Air Act Advisory Council (CAAAC).

CNEP assisted NAU ITEP to conduct and host a two day "Advanced Air Quality" training course in Tahlequah, Oklahoma. The course was held December 9-11, 2008.