EPA Region 8 Tribal Air Quality Programs
Clean Air Act Section 103 and 105
Success Stories

Compiled by:
The Southern Ute Indian Tribe
Air Quality Program 2006

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Southern Ute Indian Tribe Environmental Programs Division 103 and 105 Air Quality Program Grants

History

The Southern Ute Indian Reservation is located in southwestern Colorado. The reservation extends across three counties and borders New Mexico to the south. Its total area is approximately 681,306 acres, which encompasses all land within the external boundaries of the Reservation. The Reservation is situated directly in between the San Juan National Forest, to the north, and the northwestern New Mexico desert, to the south. The Tribe owns 313,070 acres, while the remaining land mass is comprised of non-Indian and government land in a checkerboard fashion. The total population within the reservation exterior boundaries is 11,159. The total tribal population is 1,422. The primary land use is agricultural and the predominant industry is natural gas production. The Southern Ute Indian Tribe (SUIT) has 37 permitted Title V sources within its exterior boundaries; this constitutes nearly 1/3 of all Title V sources in Indian country in the U.S. As a result, air pollution is a concern of the people inhabiting the Southern Ute Indian Reservation and areas surrounding the Reservation.

The program began in the early 1980's monitoring for PM10 and TSP ("Total Suspended Particulate"). In the 1990's, the program began exploring the possibility of developing a regulatory program through administering its own Title V Operating Permit Program with completing an Operating Permit Feasibility Study. The Feasibility Study indicated that developing an Operating Permit Program was feasible. The Tribe immediately began developing its permitting program, which was halted by a jurisdictional dispute with the State of Colorado regarding checkerboard lands within the Reservation boundaries. While the permitting program was pending, the Tribe moved forward with other aspects of the program, which primarily focused on conducting gaseous and particulate air monitoring. To date, the Tribe is operating and maintaining two air monitoring shelters that are collecting quality assured NOx, O3, CO, PM10, and meteorological data. We are also working on the development and completion of an updated Emissions Inventory (EI), participating and conducting various research and feasibility studies pertaining to pollutants threatening the people within and neighboring the Reservation. In addition, the Tribe has been involved in national and regional air quality initiatives such as the Western Regional Air Partnership, the National Tribal Air Association, and the Four Corners Air Quality Task Force and public outreach programs.

Title V Program Development

In order to get around the jurisdictional dispute, the Tribe entered into an Intergovernmental Agreement ("IGA") with the state of Colorado providing for joint oversight of a Reservation Air Program that would develop and administer all air quality programs and regulations approved by the Southern Ute Indian Tribe Environmental Commission/State of Colorado ("Commission"). The IGA was approved by both the State of Colorado Legislature and the Southern Ute Indian Tribal Council in 1999 and was finally federally recognized on October 18,

2004 when President George W. Bush signed Public Law 108-336. This has cleared the way for the SUIT to begin developing the Commission and the Title V Part 70 Operating Permits Program delegation application. The Commission was developed in 2003 with the state selecting three state commissioners and the Tribe selecting the other three tribal commissioners. Procedural Rules have been developed providing the Commission's official administrative procedural guidance. Since the passage of PL 208-336, the Commission meetings have been reinitialized with the Reservation Air Program developing the knowledge of the Commission through instructional and educational presentations of the Federal Clean Air Act (CAA) and its application to the Reservation. Topics have included an Orientation to the Colorado/Southern Ute Indian Tribe Environmental Commission, an Overview of the CAA and the Reservation Applicable CAA Programs, and the Rule Making Process. The Tribe is currently working simultaneously on a Long Term Plan, Operating Permits Regulations, and a Title V (Part 70) Operating Permits Program Delegation application submittal package.

Air Monitoring

Our two air monitoring shelters include analyzers collecting quality assured data for nitrogen monoxide, nitrogen dioxide, oxides of nitrogen, ozone, and particulate matter (PM10). Additionally, at the site located within the most densely populated area within the reservation we also have an analyzer monitoring for carbon monoxide (CO). We also maintain two full meteorological stations monitoring and collecting quality assured data for wind speed, wind direction, solar radiation, relative humidity, and temperature at both sites. The sites were established and referenced using the applicable EPA reference methods. At both of our sites our instruments, analyzers, and monitors have an outstanding record of collecting quality assured and quality controlled (QAQC) data. Our average quarterly data collection for all of our parameters has been above 80% data capture the past '04, 6-qtr. fiscal year.

Our air monitoring program is currently involved in various research and feasibility studies pertaining to pollutants threatening the people within and neighboring areas of the Reservation. These studies include a mercury monitoring research/feasibility study intended to evaluate the need and feasibility for mercury monitoring on the Reservation. Mercury air pollution is an ever increasing concern for our region as two of the largest mercury emitting power plants within 50 miles from our reservation boarder. Mercury pollution is a neuron-toxin and very dangerous at elevated levels. Concurrently, we are conducting a network review assessing the recent PM 2.5 EPA amendments. This review is to complete and tailor a monitoring project in conjunction with the newly proposed standards.

Emissions Inventory

A comprehensive Emissions Inventory for air pollutants within the exterior boundaries of the reservation was completed in 2005. The emissions inventory includes quantifiable air emissions from multiple sources on the reservation based on emissions estimates calculated using various methods. These methods include emissions factors published in Compilation of Air Pollutant Emission Factors, AP-42; the EPA's computer model for biogenic sources, BEIS 2.3; landfill gas, LandGEM Version 2.01; and the FAA's computer model for airplane and associated emissions, EDMS Version 4.2. The EI includes data for all major point sources, landfills, airports, and all biogenic emissions as well as data for minor point sources including on-road sources and non-road sources.

The Tribal Emissions Inventory Software Solution (TEISS) was used for emissions calculations and for portions of this final report. The emissions inventory reported the annual calculated projections of emissions for the Reservation (see Table 1.1 and Chart 1.1). Updating of our EI is currently in progress. Agricultural sources, and a more detailed oil and gas minor source compressor engines emissions section will be further inventoried for the updated EI.

Participation in National and Regional Air Quality Tribe Initiatives

The Southern Ute Air Quality Program is also an active participant in various air quality initiatives within the national, regional, and local environmental arena. A few of these initiatives include the National Tribal Air Association (NTAA), the Western Regional Air Partnership (WRAP), and the Four Corners Air Quality Task Force.

We are currently active participants and supporters of the National Tribal Air Association. Our mission together is to advance air quality management policies and programs, consistent with the needs, interests, and unique legal status of American Indian Tribes, Alaska Natives and Native Hawaiians.[2] The NTAA objectives are to: Advocating & Advance Tribal Air Issues, Provide Communication, Education & Outreach, Help Build Partnerships, and Provide Policy Analysis & Guidance.[2]

The Western Regional Air Partnership (WRAP) is a collaborative effort of tribal governments, state governments and various federal agencies to implement the Grand Canyon Visibility Transport Commission's recommendation and to develop the technical and policy tools needed by western states and tribes to comply with the U.S. EPA's regional haze regulations and other common air quality issues raised by WRAP members.[1] The S. Ute Air Quality Program has participated in the WRAP activity from the development of the GCVTC to the current projects being developed by the WRAP.

Locally we are involved in the Four Corners Air Quality Task Force which is a unique partnership joining surrounding states, sovereign nations, industry, and other local stakeholders in the protection of clean air amid the industrial endeavors associated with our natural resources in our immediate region.

Educational Outreach

The Southern Ute Air Quality Program is actively participating in educational outreach within our local community. Our involvement includes helping with discovery camp. This is held each summer for elementary children on the Reservation. During this camp we educate the children about air quality/air pollution through games, activities, and field trips. We also speak at area schools; lecturing on the different types and sources of pollution, as well as, working on small class projects and worksheets, encouraging students to understand their role in reducing air pollution emissions. Our lectures also include time to answer questions regarding air pollution in our region.

Conclusion

The Southern Ute Indian Tribe's Air Quality Program's successes including our Title V program development, air monitoring, EI, participation in air quality initiatives and educational outreach are based at the core of the Tribe's Environmental Programs Department. Sufficient funding is always a problem, especially for all tribal nations. However, our concern for all Reservation residents, Tribal and non-Tribal, in our region as well as a concern for our environment, fueled by our grants, gives our program the opportunities to succeed. Our program's long term goal is to utilize the Title V permit revenue to continue to build our program's capacity to develop further necessary CAA programs.

[1] http://www.wrapair.org/about/index.html
[2] http://www.ntaatribalair.org/home.htm

FORT PECK ASSINIBOINE & SIOUX TRIBES OFFICE OF ENVIRONMENTAL PROTECTION

The Fort Peck Assiniboine & Sioux Indian Reservation (Fort Peck Tribes) covers approximately 2,093,318 acres of rolling prairie land in northeastern Montana. The major portion of the reservation lies within the boundaries of Roosevelt County, with smaller segments in Daniels, Valley, and Sheridan counties. Rivers form natural boundaries on three sides of the reservation, with the Missouri as the southern border, Big Muddy Creek to the east, and Porcupine Creek to the West. The northern boundary runs parallel to, and 25 miles south of, the Montana-Canada border.

The reservation environment is typical of the unique beauty found in the short-grass prairies of the Northern Great Plains region. The fertile bottom land along the Missouri River allows for excellent irrigated farming while the timbered main watercourse provides shelter for livestock and wildlife during diverse weather conditions. The natural "breaks" areas along the Missouri River, with rugged, sandstone cliffs rising above the water, offer scenic testimony to the power of this mighty river.

The valleys of the Poplar River and Big Muddy Creek are broad and flat, with occasional rolling and broken terrain. Land contours rise gently to the north and west and are drained by several streams. The elevated bench lands at the edge of the valleys generally have steep slopes but are relatively level on top and suitable for farming. The isolated badland areas scattered throughout the reservation provide marginal rangeland. Elevations throughout the reservation vary from 1,900 to 3,100 feet.

The remoteness of the Fort Peck Assiniboine & Sioux Reservation has so far protected the natural environmental and rural lifestyle of its people. Careful planning and foresight will ensure the maintenance of this valuable heritage for the generations to come.

The quality of the air in a given area has an important bearing on the health of the local residents. Excessively high levels of particulates and sulfur dioxides have been associated with increased respiratory ailments and are known to aggravate existing respiratory conditions. Therefore, the tribes were redesignated into a Class I airshed in 1982. The Fort Peck Tribes received first funding from the Environmental Protection Agency for the ambient air monitoring station near the northern boundary of the reservation in 1980, known as the Poplar River Monitoring Program, which operated until 1990, the site was moved to a new location called the Law & Order site in 1991, until visibility monitoring discontinued in 1984 and meteorology discontinued in 1996.

Fort Peck Tribes, Office of Environmental Protection-Air Quality, began and continue to operate the National Atmospheric Deposition Program (NADP), acid rain network from 1982 to present.

Fort Peck initiated particulate monitoring in 1982. Sites were located several different places since the beginning date, starting with Total Suspended Particulate (TSP) and advancing to PM10 which ended in 1999.

In addition, the National Oceanic and Atmospheric Administration and the Fort Peck Tribes have set up a long-term surface radiation (SURFRAD) monitoring site on the Reservation. This program began 1995 and will continue for at least 25 years. Also, in 1997, Colorado State University in conjunction with USDA initiated the Ultra Violet B radiation monitoring site. Both sites are maintained routinely and checked weekly of operation status by the Fort Peck Tribes-OEP.

In February, 2001, the U.S. Environmental Protection Agency Region VIII and the Fort Peck Tribes expressed the intent to establish a new Interagency Monitoring of Protected Visual Environment (IMPROVE) protocol site on the Fort Peck Reservation. The particulate matter site is intended for long-term monitoring with sampling has begun in 2002. Modules operating are PM10 and PM2.5 and baseline visibility.

Also, the Fort Peck Tribes are developing a minor source program to monitor small emission sources on the reservation. This program will also assist the Tribes with increment tracking under the Prevention of Significant Deterioration (PSD) program. Tribal staff are also using the Tribal Emissions Inventory Software Solution (TEISS) software to update emission inventory on the reservation for better management of the Tribes Class I airshed.

Confederated Salish and Kootenai Tribes
Environmental Programs Division Air Quality Program
105 and 103 Air Quality Program Grants

Randy Ashley – Air Quality Program Manager
Allan Bunce – Air Quality Technician
Rene Kenmille – Air Quality Technician/Secretary

Budget Information:

	PPG	PM2.5	EXCHANGE (2 year grant)	
Personnel	$ 95,802.00	$ 45,985.00	$ 23,027.00	
Operating Costs	$ 25,156.00	$ 10,880.00	$ 66,050.00	
Travel	$ 6,500.00	$ 500.00	$ 3,600.00	
Contractual	$ 26,136.00	$ 37,180.00	$ 25,001.00	
Capital Equipment			$ 20,000.00	
In-Kind	$ 18,926.00			
Indirect Costs	$ 35,663.00	$ 16,051.00	$ 19,156.00	
	$208,183.00	$110,596.00	$ 156,834.00	**$475,613.00**

The Confederated Salish and Kootenai Tribes passed Resolution #5627, dated July 1979 to re-designated the Flathead Indian Reservation Air Shed to a Class I Status, which was subsequently approved by the EPA in 1980. The tribes established an Ambient Air Quality Monitoring Program in 1981. Data was first collected in 1984.

The towns of Polson and Ronan are designated nonattainment for PM-10.

The current air monitoring network measures criteria pollutants particulate matter (PM-10 and PM2.5) and also maintains an IMPROVE monitoring station on top of Jette.

The program has completed a detailed emissions inventory for the Reservation. The emissions inventory identified the largest sources of particulate matter to be (in order of magnitude): (1) unpaved road dust, (2) wildfire, (3) paved road dust, (4) residential wood combustion, (5) construction fugitives. The largest source of volatile organic compounds (VOCs), by a large margin is biogenic.

The program is reviewing with EPA the non-attainment status of Ronan and Polson due to data suggesting the possibility of reclassifying both areas as meeting attainment for PM-10. Previously, the monitoring of PM 2.5 at Ronan and Polson led to both areas being classified as in attainment for PM 2.5.

Spirit Lake Nation
EPA Air Quality Program
Submitted by: Frank Black Cloud

Spirit Lake Tribe (SLT) Air Quality Program began back in 2001. We started our Air Program because there was a need for the tribe to understand the impacts on our air quality. There was no data available for the reservation prior to this date. We started out by conducting an emissions inventory. This took approximately one year of data collecting of various emissions sources within our exterior boundaries such as; tail pipe emissions, minor sources, gas stations, schools, government buildings, residential wood stoves, agriculture operations, major sources, etc. During the collection process we discovered there were no real impacts to our air quality but that we had a major source within our boundaries owned and operated by the tribe. This source is Sioux Manufacturing Corp. (SMC) which is a supplier of Kevlar products to the US Government. US EPA Region 8 was also attempting to have this company apply for an operating permit (Title V, Part 71) since this company was on tribal land and owned and operated by the tribe the State had no jurisdiction over it and the company fell under federal regulations. This facility had been operating since 1983 without an operating permit and was a major emitter of Volatile Organic Compounds (VOC's) and Hazardous Air Pollutants (HAPs).

Picture 1.1

Once our emissions inventory was completed US EPA Region 8 had some data to go on with respect to the types and amounts of emissions coming from the facility. There was no data available prior to the completion of our EI. SLT EPA was contacted in June of 2002 by US EPA Region 8 and asked to intervene in attempts to have the facility submit their operating permit to the region. Until this time the facility was under the belief that they were exempt from any other government's authority as it was solely owned and operated by the tribe. SLT EPA made arraignments with US EPA and SMC too meet and have open discussions on the need for an operating permit. Once this meeting was concluded the facility finally saw the reasoning behind EPA's request for an operating permit but lacked the technical knowledge on how to complete the permit application. SLT EPA then researched several prospective consulting firms which specialized in Title V permits and Tribal Gov't operations. This was not an easy task and we had several interviews with prospective consulting firms before SMC decided to hire Air Sciences Inc. of Golden, CO.

Before we go any further perhaps we should discuss the process needed to occur to create Kevlar and why US EPA Region 8 was insistent on the facility applying for a Title V, Part 71 permit. SMC is one of three manufacturers in the United States that produces Kevlar products for the US Government, Department of Defense to be exact. This product is produced from a single yarn and the entire process is from spinning the yarn to coating the material after it has

been weaved and then pressed into a product, all of which takes place within the confines of one building. There are little to no emissions from weaving the cloth. The emissions come from the coating line where several chemicals are combined to make a resin strong enough to adhere the material together and turn it into Kevlar. There are several compounds needed for this to happen; Methyl Ethyl Keytone (MEK), IP Alcohol, Arotap – Phenolic Resin (methanol, phenol, formaldehyde) and 1,2-Diaminocyclohexane. The combination of these chemicals creates VOCs and HAPs which are released through three stacks located above the heating ovens that are used to dry the resin onto the cloth (Picture 1-1). This process emits approximately 462 tons of HAPs per year. A single facility may emit 25 tons of any single HAP. SMC has been emitting 459 tons per year of just MEK. A facility can also emit 250 tons per year of a combination of VOCs, which made this facility out of compliance with any permits allowed throughout the United States by nearly double! This had been occurring for nearly two decades of operation by the facility. So the need for SLT EPA to step in was very apparent and worthwhile after you consider these numbers. Not only to bring the facility into compliance with any permits needed for its continued operation but also for the health and welfare of the citizens of the Spirit Lake Nation who were involuntarily being exposed to chemicals that can be harmful to their health. The health effects associated with exposure to MEK at high rates can range from neurological affects, upper respiratory problems, asthma triggers, as well reproductive harm. None of this was known by the tribe prior to any of the research conducted.

Picture 1-2

After the consulting firm was chosen our work in respect to the facility had really just begun. We then began a rigorous task of assisting SMC with any and all questions it had with respect to the operating permit and became very involved with the type of control technology it needed to install to reduce their emissions. After much research all parties involved; SMC, SLT EPA, and US EPA, we all came to the conclusion that the Maximum Achievable Control Technologies (MACT) was the installation of a thermal oxidizer (Picture 1-2) which would burn all emissions from stacks above the coating line at a higher temperature thereby reducing the emissions by approximately 97%. This, as it turns out, would be a requirement for the facilities Prevention of Significant Deterioration (PSD) application which was being completed as part of their total operating permit package. SMC had a timeline of June 2005 to have the full completed application into US EPA Region 8's hands. Any later then that and SMC could face fines of up to $25,000.00 per day from the beginning of operation. This amount would be $200,750,000.00 which of course would not only bankrupt the company but put over 300 tribal members out of work. But through our timely intervention into the entire situation we were able to bring this company into compliance which allowed it to continue doing business. This we see as a major success as we have shown that we are able to "Police-Our-Own", it's a good example of working with the Federal government on a "Government-to-Government" relationship, and it shows how by taking action you can help to prevent any further exposure to dangerous chemicals by citizens liv-

ing around a major facility.

During this entire time the SLT EPA Air Quality Program had received a grant to conduct an Urban Air Toxics Monitoring Program (UATMP) to monitor the types and quantities of emissions coming from SMC. We are proud to say that we were the first tribe to ever apply for this type of monitoring program throughout the US and have it funded all on its own. We were not affiliated with any other State, local government's efforts to monitor this facility. Our original plan for the direction of the air program was to conduct PM monitoring which we had to scrap once we discovered the need for the UATMP. That monitoring program was completed successfully and we are currently using the data collected to conduct a Risk Assessment for the tribe which can be used for compliance issues in the future. Now that the thermal oxidizer is in place, three months sooner then required by EPA, we are looking forward to at least two more years of data collection through an additional UATMP grant to see if in fact the control technologies are as effective as we suspect them to be.

During this entire time we were receiving trainings from both the Institute for Tribal Environmental Professionals (ITEP) and the Tribal Air Monitoring Support (TAMS) center. The trainings ranged from all the Level 1 courses up to the Level 3 courses offered by both entities. Our air program was also very instrumental in the development of the Air Toxics Training Course now offered by ITEP. We were the first tribe to offer and share the information we learned from our experiences with SMC and US EPA Region 8. Our Air Program Coordinator also assists ITEP and TAMS with other trainings such as Emissions Inventories, Fundamentals of Air Pollution Technology, MET Stations, Introduction to Air Quality Management, and Quality Assurance Project Plans. We are very proud to be asked by these two well respected training facilities to assist them in the training of other tribes throughout Indian Country in their efforts to conduct air quality work. It is our utmost belief that by being asked to assist with these trainings we are doing a good job that is exemplary work for other tribes to follow.

Our Air quality Program also conducts many educational and outreach projects within our own reservation. We conduct seminars on the work we've completed to date, how these efforts have greatly reduced impacts to the residents of Spirit Lake Nation. We are also very involved in a Residential Mold Research Project currently being undertaken by the Tribal Housing Authority, Tribal Health, Tribal Council and the SLT EPA. This project is designed to discover the types of molds that are invading our tribal homes and better ways to construct tribal homes to alleviate the mold issues. We educate the public on ways they can reduce their family's exposure to mold in their homes. All in all we feel our air program is still a work in progress and a high light for all tribal air programs.

FORT BELKNAP AIR QUALITY PROGRAM

The Environmental Director, Ina Nez Perce, put in for the Clean Air Act Section 103 Special Projects and was awarded the grant in Oct. 2000. Kermit Snow Jr. was hired Jan. 8, 2001 to run the program. He started by taking "Introduction to Air Quality" from the Institute for Tribal Environmental Professionals (ITEP) and many other courses to learn about air quality and the problems and solutions associated with it. One of the first things to be completed, was to hire a Contractor to help with the Emissions Inventory. Portage Environmental, Inc. was hired and our first EI was completed in 2002 for the year 2000. We finished another one for the year 2002. We will be updating for 2005 using the TEISS software in 2006.

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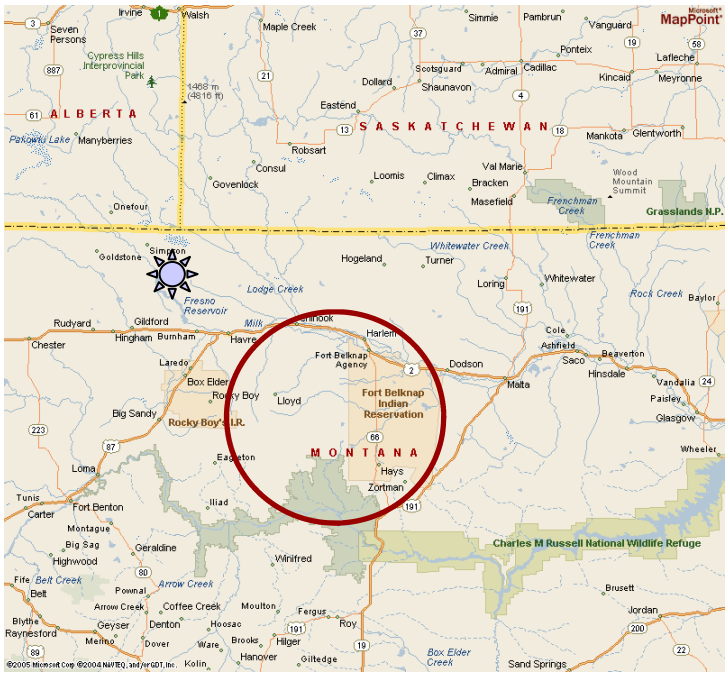

monitor

airshed

In the spring of 2004, we started a saturation study (PM10) in the area of the Little Rocky Mountains, on the southern edge of the reservation. This is where the Zortman/Landusky Gold mine was. I set up AQ sites at the Hays-Lodge Pole High School, the Lodge Pole Elementary School, and a Tribal members house that was directly east of the mine. We finished monitoring in May of 2005. We started the study (PM10 & PM2.5) at the Agency in Oct. 2005, with sites at the Headstart Center and the Tourism Building.

In Sept. 2005, we got the Tribe to sign on as a co-sponsor with the Northern Cheyenne Tribe and Montana Environmental Information Center (MEIC) on the new Draft Air Mercury Rule for Montana. We are also in the process of getting an Open Outdoor Burn and Prescribed Rangeland and Forestry Burning Ordinance, this is out for a 30-day comment period which will end March 8, 2006.

We got the Tribe to become a member of the National Tribal Air Association in the second year of its existence and Kermit is also an associate member, with voting rights given to him by the Tribe. He also is a member of the Tribal Data Development Work Group of the Western Regional Air Partner Ship (WRAP).

Northern Cheyenne Air Quality Control Division
Fact Sheet

1977 August 5: The Northern Cheyenne Reservation became the first area in the United States to be redesignated to a Class I air shed, two days before National Parks and Wilderness areas became federally mandated Class I sheds.

1979 September 9: Montana Power Company was granted a Federal Prevention of Significant Deterioration (PSD) Permit to build and operate power plants three and four in Colstrip, Montana. This means that plant's three and four would not violate the sulfur dioxide and nitrogen dioxide National Ambient Air Quality Standards on the Northern Cheyenne Reservation more than once per calendar year.

1980 The Northern Cheyenne Tribe and Montana Power Company entered into an air quality agreement. Three Federal PSD air monitoring sites are to be located on the Northern Cheyenne Reservation.

1981 March: The three air quality PSD sites begin operation on the Northern Cheyenne Reservation. They are located near Badger Peak, near Garfield Peak and Morningstar View. The PSD sites monitor for sulfur dioxide (SO2), nitrogen dioxide (NO2), wind direction, wind speed, temperature, dew point, barometric pressure, solar radiation, precipitation, visibility and a camera system at Morningstar that photographs the Colstrip power plants at 9:00 a.m. and 3:00 p.m. daily. A third party contractor, GeoResearch, Inc., is chosen by the NCT and MPC to operate the sites until August 1996.

1982 The Northern Cheyenne Tribe receives an EPA grant to monitor for Total Suspended Particles (TSP) in Busby, Birney and Lame Deer. Only Lame Deer has high readings which violate the national standards. Monitoring is discontinued at Busby and Birney.

1988 EPA brings out a new standard: PM10: Particulate matter that is 10 microns or smaller. This is a health based standard. Monitoring is every two days in Lame Deer for PM10. The monitoring is at the Lame Deer Intersection (LDI). This is at the intersection of U.S. Highway 212, Montana Highway 39, and Cheyenne Avenue in Lame Deer.

1989 Wind speed and wind direction monitors are added to the LDI site. Everyday PM10 sampling is initiated in November.

1990 April: An exceedence and violation of the PM10 standard are recorded at the LDI site. Through Chemical Mass Balance (CMB) studies it is shown that re-entrained road dust from sanding material that is applied on the highways and streets in Lame Deer in the winter season is the main PM10 problem.

1991 Temperature, Barometric Pressure and Precipitation monitoring are added to the LDI site.

1993 January: The NCT, EPA, BIA and Montana Department of Transportation enter into a Memorandum of Agreement (MOA) to address the Lame Deer PM10 issue. These parties agree to apply sanding material that is washed after being crushed. Rosebud County doesn't sign the MOA, but agrees to supply the BIA with washed sand.

September: The Northern Cheyenne Tribe signs a three-year contract with MPC to operate the three PSD sites on the reservation. The Air Quality Division will take on this responsibility.

January: Began sampling for the new PM2.5 at the Lame Deer Intersection on a three day schedule with the mini-vols.

February: The Northern Cheyenne Tribe (President, Attorney and Air Quality Staff) meet with EPA to protest the rescission of the Federal PSD permit to a State Permit. This rescission was then determined to be a "non-rescission" by EPA and the PSD (TEOM) for the Lame Deer Intersection Site. This is a PM10 monitor that gives out instantaneous or real time readings. This is very important in identifying air quality PM10 episodes that may be occurring when an air quality event is in progress.

1997 May: Acquired a Tapered Element Oscillating Microbalance (TEOM) for the Lame Deer Intersection Site. This is a PM10 monitor that gives out instantaneous or real time readings. This is very important in identifying air quality PM10 episodes that may be occurring when an air quality event is in progress.

1998 January: The Northern Cheyenne Tribe elects to join the Western Regional Air Partnership (WRAP). This organization will address primarily visibility issues in the nine western United States. Currently, fourteen Tribes and nine western states are involved in the WRAP.

1998 August: Began discussions with EPA, Region VIII, concerning Burn Management Plans (BMP) and prescribed burns in redesignated Class I Air Sheds. There is no policy on this, except some weak language in the "Interim Air Quality Policy on Wildland and Prescribed Fires," that begins to address this issue.

1999 April: Division applied for a 103 grant to do PM2.5 sampling at the PM10 nonattainment site in Lame Deer—Approved for the 103 grant in September 1999.

1999 September 30: Received Treatment as a State Status for the EPA 105 Grant. Will now match 5%, instead of 40% for the total budget beginning October 1999. (Fiscal Year 2000). Began the second 3-yr. contract with PPL Montana to monitor the air on the reservation.

2000 January 1: Began PM2.5 Sampling at the Lame Deer Intersection Site. The sampling schedule is every three days.

2000 February: EPA approved the updated Quality Assurance Project Plan, which includes PM10 and PM 10 TEOM, PM2.5 and Meteorological Parameters.

2001 Began the Tribal Implementation Plan work activities under the EPA grants. Monitoring of Protected Visual Environment (IMPROVE). This monitoring equipment will be installed at the Badger PSD site in June 2002.

2002 IMPROVE site installed and monitoring started in June at Badger PSD site.

2002 September: Began the third 3-yr. contract with PPL Montana to monitor the air on the reservation.

2003 January: Filed a Dispute Resolution, Section 164(e) of the Clean Air Act, to EPA, requesting that the permit for the Roundup Power Project not be let by Montana DEQ. MDEQ did issue the permit. Through modeling and reviewing PPL's permit at Colstrip, it was found the sulfur dioxide increment for the Class I air shed on the Northern Cheyenne Reservation may be violate, Meetings and conference calls were held with the Tribe, MDEQ and EPA beginning in July 2003, and ending in April 2004, completing the Dispute Resolution process.

2004 May: A Memorandum of Agreement (MOA) was signed by the Tribe and MDEQ. EPA signed on as a separate party to the MOA. Modeling will be done by the Tribe, MDEQ, EPA and PPL.

2005 September: Began the fourth 3-yr. contract with PPL Montana to monitor the air on the reservation.

Northern Cheyenne 164 (e) Summary

January 24, 2003: The Northern Cheyenne Tribe request that the EPA Section 164(e) of the Clean Air Act for the air quality permit for the Roundup Power Plant Project issued by the Montana DEQ.
The main issues for the Tribe are:

1). Visibility impacts of NOX on the Northern Cheyenne Reservation
2). Impacts to the Class I increment for SO2 and NO2
3). The Roundup EIS did not take into account the effects of the cumulative impacts of the Hardin Power Plant.

July 23, 2003: 164(e) negotiations initiated. Matt McKinney, with the University of Montana Public Policy Research Institute, is facilitating the negotiations.

August 22, 2004: An agreement was reached and memorialized through a Memorandum of Agreement (MOA). The MOA was signed by the Tribe on April 22, 2004. Under the MOA the following three conditions were agreed upon:

1). DEQ will address SO2 increment exceedances through the Title V permit for PPL Colstrip 1-4.
2). EPA will evaluate the visibility provision of the PSD permit for Montana Power Colstrip 3 & 4.
3). DEQ, the Northern Cheyenne Tribe and EPA will conduct an increment consumption analysis focused on the Northern Cheyenne Reservation.

Current Status:

Issue of MOA-SO2 Increment Exceedances: This issue has been settled. The Tribe believed that the modeling of PPL Colstrip's allowable permit limits for Units 3 & 4 would show an SO2 increment violation for both the 24-hr and 3-hr stds and wanted the allowable permit limits reduced to avoid a "paper" increment violation (EPA was not a party to this issue in the MOA, however; we did provide technical comments on the modeling done by PPL Colstrip) PPL's modeling did show a violation of the 3-hr limit. After several months of technical modeling discussions, and EPA doing it's own modeling comparison, it was determined that PPL's 3-hr SO2 limit would be reduced from 4273 lbs/hr to 4143 lbs/hr to just barely demonstrate increment compliance. PPL's State Preconstruction permit will be revised first to reduce the limit and then the Title V permit will be revised. The Compliance schedule in PPL's Title V was removed prior to issuance of the proposed renewal permit, since a determination of a new limit was made.

Issue 2 of MOA- Visibility: This issue has not been settled. EPA determined that PPL Colstrip was in violation of an EPA, PSD permit condition for implementation of BART for NOx control, following the effective date of the MOA. In a December 4, 2004 letter, EPA proposed to settle the BART NOx for Units 3 & 4 with a limit of 0.18lbs/MMBtu on a 30-day rolling avg. and have controls installed by 12/2008. PPL responded on 3/14/05 to have controls installed on Unit 3 by 2007 (next scheduled outage) and Unit 4 by 2009, meet the 0.18 lbs/MMBtu 30-day avg. in a ramp-up fashion by the 3rd year of control installation and avg. both units to meet limit. In evaluating PPL's counter settlement proposal technical staff discussions have determined that to be protective of visibility on a short term, that PPL should also have to meet a 24-hr limit. EPA is prepared to propose in a counter to the counter offer, by late this week or early next week, to accept a summer 2007 and 2009 installing pollution controls on Units 3 & 4, respectively. Our counter would also state that average of both units is not necessary, only allow a few months to meet the 30-day limit of 0.18 lbs/MMBtu (not 3 years), and that a 24-hr NOx limit of 0.25 lbs/MMBtu would also be need to be met (this would make the settlement more defensible as it protects visibility on a short term basis also). Whatever limit(s) are agreed upon, the new NOx limit(s) would be added to the EPA, PSD permit and the State Title V permit.

Issue 3 of MOA –Increment Analysis: This task is not complete. Modelers for EPA, MT, and the Tribe determined that a comprehensive Emissions Inventory (EI) was needed to obtain emissions data in order to do a modeling increment analysis for the Reservation. EPA has contracted with Bison Engineering for $40K we got from OAR) to conduct about 2/3 of the EI. The Tribe has contracted with Bison to conduct the remaining tasks for the EI. Since March 9, 2005 there have been 2 calls with Bison and the MOA parties to discuss and clarify the EI tasks. Bison will complete the EI in September/October 2005. The modelers will use the data to conduct an increment analysis for SO2, NOx and PM10.

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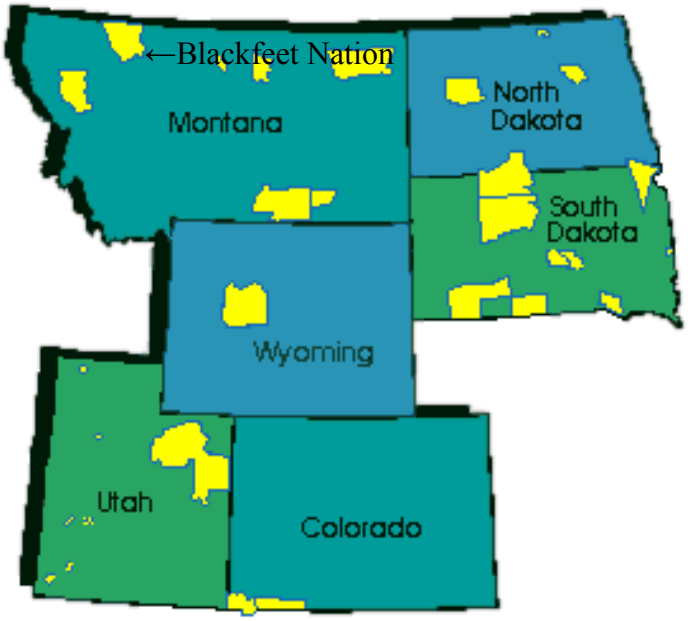
Last updated: March 2006

Blackfeet Indian Tribe
Air Quality Program



The Blackfeet Tribal Business Council has determined that it is in the best interests of the people of the Blackfeet Reservation to establish programs to protect the environment.

The Blackfeet Tribal Business Council with support from the Environmental Protection Agency has developed and instituted the Blackfeet Air Quality Program in the year of 1990. Whose purpose is to protect, improve and preserve the clean air on the Blackfeet Reservation.

The Blackfeet Tribal Business Council, acting for and on behalf of the Blackfeet tribe approved and adopted by resolution the Blackfeet Air Quality Open Burning Codes. That the Blackfeet Air Quality Program administer and carry out the enforcement of these Codes.

It is to regulate the open burning practices on the Blackfeet reservation in order to protect the public safety, health and welfare and to enhance the environment of the Blackfeet Reservation.

Up to date the Blackfeet Air Quality Programs open burning codes have been a big success. It is the best available control technology the Blackfeet tribe has. It is the best available control technology the Blackfeet tribe has. It is a techniques and method of controlling emissions of pollutants from an existing or proposed burning source to a maximum degree.

It is very important that the Blackfeet Tribe have a Air Quality Program and do air monitoring. With out it the open burning codes will not exist.

For more information contact:

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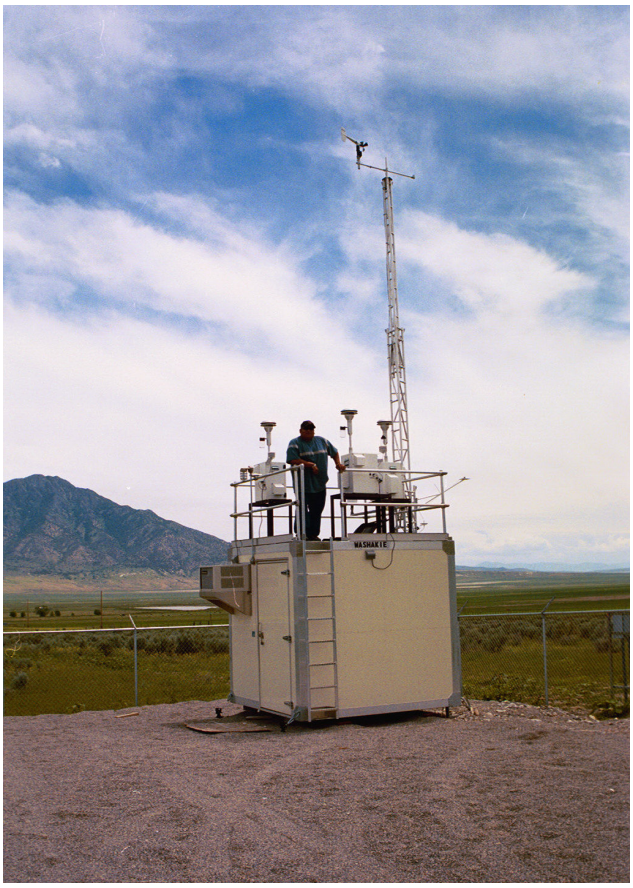
References:

Picture: http://indiannations.visitmt.com/blackfeet.shtm
Map: http://www.epa.gov/region08/tribes/

Northwest Band of the Shoshone Nation
Tribal Environmental Protection Office
Air Quality Department
U.S. EPA Clean Air Act § 103 Grant



NWBSN Washakie Site-Jason Walker

History:

The Northwestern Band of the Shoshone Nation (NWBSN) Air Quality Department was started in October 1999 under a Section 103 United States Environmental Protection Agency (EPA) grant. Jason Walker was hired in February 2000 to serve as the air quality technician. The Air Program completed an Emissions Inventory (EI) of the Washakie Reservation and surrounding air shed in the Malad Valley in 2001. The EI showed the need to pursue and air monitoring program for the Particulate Matter (PM2.5), Ozone (O3) and meteorological data. Mr. Walker has been working on this project since the program's beginning and now serves as the Air Quality Specialist with the job of overseeing the air operation with supervision by Kenneth Timbana, Environmental Protection Specialist. Mr. Walker has attended training throughout the United States in the airfield working with tribes of all statures and background. The Washakie Reservation is located in the Malad Valley surrounded by mountains on 3 sides of the valley. The reservation is located 90 miles north of the Greater Salt Lake City area along the Wasatch front mountain range. We are also located about 4 miles north northwest of Nucor Steel a mini mill facility that melts down scrap metal into new metals.

The Northwestern Band of the Shoshone Nation's Washakie Reservation is located in a remote, sparsely-populated, area. The Reservation may be undergoing increased development in the residential sector, which may have increased impacts on the current and future ambient air quality of the Reservation. There are also concerns regarding off-Reservation sources of emissions, which may have an impact on plans to develop a residential community within the boundaries of the Reservation. The planned growth and development on the Reservation warrants research to determine the environmental impact these activities may have on the local ambient air quality, in order to promote the general health and welfare of the NWBSN. An Ambient Air Quality Assessment Program (AAQAP) will require the collection and analysis of large amounts of meteorological and air quality data.

Washakie Air Monitoring Characterization Study:

NWBSN has been granted a Clean Air Act (CAA) 103 Project Grant, to collect and analyze particulate matter and meteorological data in accordance with Title 40 of the Code of Federal Regulations, Parts 50 through 58 (40CFR, 50-58). The purpose of this project is to assist the Tribe in its efforts to develop and maintain an effective Air Quality Program for the

South View of Washakie Site-Winter

Washakie Indian Reservation, in order to ascertain the potential effects on public health of the levels of particulate matter and ozone in the atmosphere. Initial grant funding has provided for the establishment of one meteorological station, one particulate monitoring site (including two offset samplers) with a co-located particulate monitor for quality assurance, and one ozone monitoring site. The objective is to initiate sampling on the NWBSN Indian Reservation for training and informational purposes, with the goal of expanding into formal network operations by the end of the fiscal year.

The NWBSN currently has one monitoring site located on the Washakie Reservation that monitors for O3 (Ozone), Particulate Matter 2.5 (PM2.5), along with meteorological data. The meteorological sensors are: Wind Speed, Wind Direction, Relative Humidity, Barometric Pressure, Solar Radiation, Temperature and Precipitation. The Washakie site has been collecting data since April of 2004. Data from this project is inputted into the AQS database that gives the EPA a better view of what conditions are over the reservation and rural area.

National and Regional Committees:

The Air Quality Department participates in national and regional committees to stay up to date on national issues regarding air quality policies and initiatives.

Western Regional Air Partnership (WRAP)/National Tribal Environmental Council (NTEC) are national organizations that the NWBSN is an active member in the following work groups.

Tribal Data Development Work Group (TDDWG): The mission of the TDDWG is to assist and advise WRAP on gathering tribal air quality data and other air quality issues related to the WRAP mission from Tribes in the WRAP area. The TDD-WG will work with the other WRAP forum and non-tribal communities to improve understanding communities of protocols and processes for obtaining and using tribal data. In addition to assisting in gathering existing air quality and air emissions data, the TDDWG will help devise a plan for filling the gaps in the tribal data.

Attribution of Haze (Aoh): As called for in the WRAP Strategic Plan, the Technical Oversight Committee has formed a workgroup to oversee the 2004 Attribution of Haze project. The Aoh project will result in a January 2005 report describing the emissions source categories and geographic source regions presently contributing to visibility impairment at each mandatory federal and tribal Class I area in the WRAP region. The Aoh workgroup will be integrating analytical results and data from monitoring, emissions, and modeling analyses. The Aoh workgroup includes the TOC, as well as representatives from the technical and joint Forums, the IOC, and the state and tribal caucuses.

National Tribal Air Association (NTAA): is a membership organization dedicated to advancing air quality management policies and programs, consistent with the needs, interest, and unique legal statues of American Indian Tribes and Alaskan Natives.

Utah Statewide Mercury (Hg) Work Group: a newly formed organization within the State of Utah committed to addressing the mercury issues of all citizens. This committee is important to the NWBSN aboriginal hunting and fishing lands in Northern Utah.

Air Program Goals:

The Air Department has a commitment to providing the very best knowledge in air quality issues and to keep the air shed over the Malad Valley pristine for now and future generations. Current levels along with new proposed National Ambient Air Quality Standards will ensure that this goal is a long term committed from this department in cooperation with EPA. Mercury Wet Deposition, Interagency Monitoring of Protected Visual Environment (IMPROVE) site and speciation studies are a few monitoring aspects the department would like to pursue in the future.

Accomplishment(s):

In the near future the NWBSN in cooperation with the State of Utah Department of Environmental Quality and EPA Region 8 will begin to have real time Ozone data into the AirNow link on the internet. Once this venture is complete and running the NWBSN will be the first tribal reservation in the United States to have a forecast for their reservation.

For more information:

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