



Technical Memorandum

To: WRAP Forums and Workgroups

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Subject: WRAP 2018 Preliminary Reasonable Progress Emissions Inventory – Final, Revised¹

Copy: WRAP Staff

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INTRODUCTION

The objective of this project is to provide the technical basis for making preliminary evaluations of reasonable progress toward individual Class I area visibility goals by the Western Regional Air Partnership (WRAP). This was done by updating the WRAP region 2018 point and area sources emission inventory projections from the 2018 Base Case version 1 project, completed by Eastern Research Group, Inc. (ERG) in January 2006.² The resulting emissions inventory is the WRAP region Preliminary Reasonable Progress emissions inventory for 2018 (PRP18).

The focus of this project was the most significant point and area sources of visibility-impairing pollution within each state, and on the specific source categories whose 2018 emissions were known to be incorrect or needed to be revised. The scope of this project was purposely limited and focused on the most significant sources of 2018 emissions in order to complete the work in a timely and efficient manner for both the State and Local (S/L) agencies reviewing the data and providing comments, as well as for the Contractor performing the analysis and making the updates.

The remaining contents of this memo describe the project scope, explain the methodology used to compile data and prepare the WRAP 2018 PRP emissions inventory, and present summary results for the WRAP region and detailed results for each jurisdiction.³ The summary results are contained in Attachment 1 (for point sources, by state) and Attachment 2 (for area sources, by state) to this memo.

¹ The final memo was revised to correct errors in the area source emissions summaries for oil and gas.

² http://wrapair.org/forums/ssjf/documents/eictts/docs/WRAP_2018_EI-Version_1-Report_Jan2006.pdf

³ The Regional Haze Rule explicitly recognized the authority of tribes to implement the provisions of the Rule, in accordance with principles of Federal Indian law, and as provided by the Clean Air Act §301(d) and the Tribal Authority Rule (TAR) (40 CFR §§49.1-.11). It is our hope that the finding and recommendations in this report will prove useful to tribes, whether they choose to submit full or partial 308 or 309 Tribal Implementation Plans (TIPs), or work with the U.S. EPA to develop Federal Implementation Plans (FIPs). The authors of this memo have striven to ensure that all references to tribes in the document are consistent with principles of tribal sovereignty and autonomy as reflected in the regulatory framework. Any inconsistency with this framework is strictly inadvertent and not an attempt to impose requirements on tribes which are not present under existing law.

SCOPE

The scope of this project is on stationary point and area sources located with the WRAP states of Alaska, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming; as well as tribal sources within those states. Certain area sources are excluded because they are being dealt with by other contractor teams: (i.e., fugitive dust, fires, area ammonia sources, etc.). Updates to the oil and gas (O&G) area source emissions, and O&G point source SO₂ emissions were developed by ENVIRON under another project, and provided to ERG for inclusion with the other point and area sources in the WRAP PRP18 emissions inventory.⁴ The California emissions were not modified in any way, and were simply retained as-is from the previous WRAP 2018 base case version 1 inventory.

In some limited cases, changes were also made to the 2002 baseline inventory when these changes were straightforward and did not affect emission values (e.g., correction of missing or erroneous source classification codes [SCCs], changing facility names to be consistent across records, etc.). In only a few instances (described below in this memo) were records added to the 2002 inventory, and subsequently, were projected to 2018 and added to the WRAP PRP18 inventory. Additional 2002 changes were identified, but were deferred until the next update of these 2002 and 2018 WRAP inventories.

The deliverables produced under this project include, in addition to a draft and final technical memorandum, WRAP PRP18 and revised 2002 inventory pivot tables (similar to those provided under ERG's previous project). ERG also provided PRP18 files formatted for modeling (i.e., SMOKE/IDA format) and for use in the WRAP EDMS (i.e., NIF3.0).

METHODOLOGY

The methodology used to develop the WRAP PRP18 emissions inventory for point and area sources is described below.

Developed 2018b Base Case Summary Tables and List of Potential Changes

ERG updated the existing WRAP 2018 version 1 database to be consistent with the 2018b "base case" emissions inventory used by the WRAP Regional Modeling Center (RMC) for the 2108 base case modeling analysis completed in June 2006. These changes are itemized in the RMC 2006 final report, Appendix A.⁵ After discussion with the RMC, and comparison to the 2018b base case emissions inventory, a few other changes were necessary to make the 2018 version 1 inventory consistent with the 2018b base case inventory, including the following:⁶

- Added NO_x and CO emissions for four new (post-2002) compressor stations in ND;
- Added SO₂ emissions for 4 facilities in WY; and
- Added NO_x, VOC, and CO emissions for 7 compressor stations in WY.

⁴ <http://www.wrapair.org/forums/ssjf/documents/eictts/oilgas.html>

⁵ <http://pah.cert.ucr.edu/aqm/308/docs.shtml>

⁶ Telephone conversation with Zac Adelman, RMC, February 6, 2007.

Using the updated 2018b base case emissions database, spreadsheets were developed to show the top 80% of emissions of point source and area source emissions, by SCC, for each state. Also, a spreadsheet entitled “Proposed Changes & Feedback Request” itemized other potential changes that might need to be made to each jurisdiction’s 2018b base case inventory to update it for PRP18 purposes. The types of changes proposed and feedback requested from each state and local (S/L) agency included the following:

- Confirmation of changes in SO₂ emissions from major sources located in §309 states (i.e., AZ, NM, UT, and WY);⁷
- Request for BART emission limits;
- Request for information on any new post-2004 “on-the-books” controls or permit limits;
- Request to provide missing SCCs (and itemized list of records with missing SCCs was provided); and
- Confirmation that all dual-fueled sources were accounted for in the emissions inventory.

These spreadsheets were e-mailed to each S/L agency for review prior to holding conference calls to explain the spreadsheets and receive initial comments from the agencies.

Collected Comments from S/L Agencies

Conference calls were held with each S/L agency from March 9 through March 19, 2007. (Note that no call was held with CA since there are no changes to be made to their existing 2018b base case emissions for PRP18 purposes.) All comments received during these calls were summarized. After the calls, and until April 18, ERG received additional written comments from all S/L agencies. These comments, along with ERG’s responses, form the basis for the changes made to each state inventory as part of the PRP18 process. Summaries of the call notes, and the comments/responses table are located on the WRAP SSJF website.⁸

Developed the WRAP 2018 PRP Emissions Inventory

The types of revisions made in order to transition the WRAP 2018b base case emissions inventory into the WRAP PRP18 emissions inventory are described below.

Addressed S/L Agency Comments

After ERG assimilated the comments received during the conference calls, via e-mails, and from numerous follow-up data requests to the agencies, changes were made to the 2018b base case database. In some cases, the changes did not affect emissions (e.g., fixed missing SCCs, changed facility name, etc.). In other cases, significant changes were made (e.g., added new sources or removed inactive sources).

⁷ “2018 SO₂ Emissions Evaluation for Non-Utility Sources”, Pechan, October 2006.
<http://www.wrapair.org/forums/ssjf/docs.html>

⁸ <http://www.wrapair.org/forums/ssjf/documents/eictts/projections.html>

Corrected CAMD EGU Facility IDs and Added Missing Records

The basis of the WRAP 2002 emissions inventory, and thus the WRAP 2018 version 1 projections, were the data submitted by S/L agencies and tribes for the U.S. EPA National Emissions Inventory (NEI). During the development of the NEI, ERG (as an U.S. EPA contractor) was requested to use NO_x and SO₂ emissions data for subject EGUs from the U.S. EPA Clean Air Markets Division (CAMD) database, instead of the emissions submitted by the S/L agencies for those EGUs reporting to CAMD. When these NO_x and SO₂ emissions data were placed into the NEI, they were assigned a unique facility ID beginning with “EGU” in order to distinguish that record from the record submitted by the state. Generally, the NO_x and SO₂ emissions values from CAMD varied only slightly from those submitted by the S/L agency (i.e., ERG observed results showing about a 1-2% difference in emissions between CAMD and S/L agency emissions). However, the use of the CAMD “EGU” numbering scheme caused there to be two different facility IDs for the same EGU in the resulting dataset. This eventually became recognized as a problem when these data were used in the WRAP 2002 and 2018 pivot tables and in the WRAP Emissions Data Management System (EDMS).⁹

Also, another problem had occurred during the data replacement activities, that resulted in some NO_x and SO₂ emission records for non-CAMD units operating at facilities with CAMD units being deleted, causing non-CAMD EGU emissions to be underreported in the resulting dataset. For these reasons, ERG performed a task to (1) replace the CAMD “EGU” facility IDs with the S/L agency facility IDs as originally submitted to the NEI, and (2) to replace the dropped NO_x and SO₂ emission records in the 2002 inventory database and project these to 2018. These corrections are now reflected in the draft WRAP 2018 PRP emissions inventory.

Revised EGU Projections

In addition to the EGU corrections just described, ERG, with the assistance from WRAP staff, updated the analysis of future coal-fired EGUs (i.e., units that will need to be built in order to meet future projected electricity demand). ERG obtained the most recent annual energy projections from the Energy Information Administration (EIA).¹⁰ The previous analysis relied on EIA projections released in 2005 with estimates out to 2025; the most current projections were released in February 2007 and provide estimates out to 2030. As with the original analysis, generation projections for 2018 were used for the revised analysis. A comparison of the original and revised generation projections are shown in Table 1.

The revised analysis of future electricity generation for coal is summarized in Table 2, which shows that the required 2018 generation in the revised analysis increased by 7.3% (i.e., 27.40 billion kWh) relative to the original analysis. This growth is offset by increased generation capacity (i.e., 52.51 billion kWh) that is currently being permitted. A list of facilities that are currently under construction or currently being permitted is provided in Table 3.

⁹ “SO_x and NO_x Emissions Data from Electricity Generating Units (EGUs): Issues related to the substitution of state/local/tribal (S/L/T) data in the 2002 National Emissions Inventory (NEI) and the WRAP-EDMS data base.” Whitepaper prepared by Matt Poppen, Eric Raisanen and Bob Downing, Emissions Inventory Unit, Maricopa Co. Air Quality Dept. (MCAQD). April 2006.

¹⁰ *Annual Energy Outlook 2007 with Projections to 2030*. DOE/EIA-0383(2007). Energy Information Administration, Washington, DC. February 2007.

Table 1. EIA Electricity Projections (billion kWh)

Electricity Market Module Region	2018 Required Coal-Fired Generation (2005 EIA)	2018 Required Coal-Fired Generation (2007 EIA)
California ^a	77.76	83.17
Northwest Power Pool ^b	88.37	106.05
Rocky Mountain Power Area ^c	162.18	167.05
Mid-Continent Area Power Pool (ND and SD portions only)	45.61	45.05
Total	373.92	401.32

^a Portions of CA.

^b ID, OR, UT, WA, and WY; portions of CA, MT, NV, and SD.

^c AZ and CO; portions of NV and NM.

Table 2. Future Electricity Generation Analysis (billion kWh)

Growth Parameter	Original 2018 ERG Analysis (2005 EIA)	Revised 2018 ERG Analysis (2007 EIA)
2002 Electricity Generation	258.70	258.70
2018 Electricity Generation	373.92	401.32
Needed Generation	115.22	142.62
Unused Capacity at Existing 2002 Facilities	16.60	16.60
New Capacity at 2003-2004 Facilities	0.66	0.66
Capacity Currently Under Construction	9.61	9.83
Capacity Currently Being Permitted	21.82	74.33
Remaining Capacity to be Allocated	66.53	41.20

Table 3. Coal-Fired EGUs Under Construction or Being Permitted (MW)

Facility Name	State	Original 2018 ERG Analysis		Revised 2018 ERG Analysis	
		Under Construction	Being Permitted	Under Construction	Being Permitted
Rocky Mountain Power/Hardin Gen. Station	MT	160		160	
Bull Mountain Plant/ Roundup Plant	MT	750		780	
Wygen Station #2/ Black Hills Corp	WY	100		100	
Two Elk (#1)/ Bechtel	WY	280		280	
Springerville (#3 and #4)	AZ		760		800
Comanche (#3)	CO			750	750
Northern Nevada Energy/ Newmont	NV		200		200
NEVCO Energy Company	UT		270		270
Intermountain Power Plant (#3)	UT		950		950
Ft. Morgan/ LS Power	CO				600
Akron/ AES Power	CO				640
Highwood/ Southern Montana Electric	MT				270
White Pine Energy Association/ LS Power	NV				1,500
Gascoyne #1/ Montana Dakota Utility	ND				175
Gascoyne #2/ Montana Dakota Utility	ND				500
South Heart/ Great Northern Power	ND				500
Great River Energy	ND				66
Wygen (#3)	WY				100
Two Elk (#2)	WY				740
Dry Fork/ Basin Electric	WY				422
Desert Rock/Sithe Global Power	Navajo (NM)				1,500
Total		1,290	2,180	2,070	9,983

Assuming that a typical future coal-fired EGU has a nameplate capacity of 500 MW and operates at the capacity threshold of 0.85, then a total of 11 future coal-fired EGUs are required under the revised analysis compared to the 18 EGUs estimated with the original analysis. The state-level allocation of the future coal-fired EGUs in the original analysis was based upon current state-level capacity (i.e., sum of capacity at existing, under construction, and permitted facilities). This same state-level allocation was maintained for the revised analysis with three exceptions.

First, no additional future coal-fired EGUs were assigned to ND; the ND and SD generation analysis was conducted separately from the other Western states because ND and SD are in a different electricity market module region and lignite coal is preferentially used, instead of bituminous and sub-bituminous coal. Three future coal-fired EGUs (i.e., total of 1,500 MW) were allocated to ND and SD in the original analysis; the newly identified permitted facilities located in ND (i.e., Gascoyne #1 and #2, South Heart, and Great River Energy) have a total capacity of 1,241 MW. In addition, the ND and SD projected coal-fired electricity generation decreased slightly in the new EIA data. Therefore, no additional EGUs were assigned to ND.

The second exception is that the one future coal-fired EGU assigned to Idaho in the original analysis was removed. This is based upon a moratorium on the construction of coal-fired EGUs in Idaho. Although this moratorium is not necessarily permanent, WRAP staff indicated that the future coal-fired EGU assigned to Idaho should be removed from the revised analysis.

The third exception is the identification of the Desert Rock/Sithe Global Power EGU consisting of two 750 MW units that is being permitted for the Navajo Nation (San Juan County, New Mexico). Desert Rock will “replace” the two future coal-fired EGUs allocated to the Navajo Nation in the original ERG analysis, as well as one other EGU located elsewhere from the original ERG analysis. Because the highest number of allocated future coal-fired EGUs were located in Wyoming, in the previous analysis, the number of these EGUs was reduced from three to two in the PRP18 analysis.

The state-level allocations are presented in Table 4. WRAP staff indicated that the county-level allocations used in the original analysis (based upon announcements of plans to build coal-fired EGUs and locations of existing coal-fired EGUs and associated infrastructure) should be maintained in the PRP18 analysis.

In addition to new generation projections and future plant allocations, the revised EGU analysis included a review of permitted emission rates for new EGUs. The previous analysis used emission rates derived from a range of values from 12 Western facilities that were reported to U.S. EPA; the revised analysis uses permitted emission rates collected by WRAP staff.¹¹ These emission rates are shown in Table 5; blank cells in the table indicated no reported permit limit. It should be noted that the EGUs shown in Tables 3 and 5 do not correspond exactly. In particular, Hardin Generating Station and Desert Rock are included in Table 3, but not in Table 5. Conversely, Otter Tail and Neil Simpson #2 are included in Table 5, but not in Table 3. The Otter Tail and Neil Simpson #2 EGUs were included in the 2002 inventory (thus not considered as an “under construction” or “being permitted” facility in Table 3), but their permitted emission rates were obtained during the development of Table 5. The Hardin Generating Station permitted emission rates were not obtained during the development of Table 5, while the Desert

¹¹ Listing of permitted coal-fired emission rates provided by Lee Gribovicz, WRAP.

Table 4. State-Level Allocation of Future Placeholder Coal-Fired EGUs Required to Match Total Electricity Demand Forecasts (Number of 500 MW Units)

State	Original ERG 2018b Base Case Analysis	Revised ERG PRP18 Analysis
Arizona	2	2
Colorado	2	2
Idaho	1	0
Montana	1	1
Nevada	1	1
New Mexico	1	1
North Dakota	3	0
Oregon	0	0
South Dakota	0	0
Utah	2	2
Washington	0	0
Wyoming	3	2
Tribes (Navajo)	2	0
Total	18	11

Table 5. Permitted Emissions Rates for Coal-Fired EGUs (lb/MMBtu)

Facility Name	State	NO _x	SO ₂	VOC	CO	PM ₁₀
Springerville #3	AZ	0.090	0.090			0.055 ^a
Springerville #4	AZ	0.054	0.077			0.055 ^a
AES Power/Akron	CO	0.070	0.100			0.012
Comanche #3	CO	0.080	0.100	0.0035	0.130	0.013
LS Power/Ft. Morgan	CO	0.070	0.078			0.012
Roundup Power/Bull Mountain #1	MT	0.070	0.100	0.0030	0.15	0.012
Roundup Power/Bull Mountain #2	MT	0.070	0.100	0.0030	0.15	0.012
Southern Montana Electric/ Highwood	MT	0.070	0.038	0.0030	0.10	0.012
Nevada Energy/Newmont	NV	0.067	0.090		0.150	0.012
LS Power/ White Pine Energy	NV	0.070	0.078			0.012
Great River Energy	ND	0.090	0.060			0.013
Montana Dakota Utility/Gascoyne #1	ND	0.090	0.038	0.0050	0.150	0.013
Montana Dakota Utility/Gascoyne #2	ND	0.090	0.060			0.012
Great Northern Power/South Heart	ND	0.090	0.039	0.0025	0.150	0.010
Otter Tail Power Company	SD			0.0036	0.150	0.030
Intermountain Power #3	UT	0.070	0.090	0.0027	0.15	0.012
Nevco/Sevier Power	UT	0.100	0.022		0.115	0.0154
Basin Electric/ Dry Fork	WY	0.050	0.080	0.0039	0.15	0.012
Black Hills Power/ Neil Simpson #2	WY	0.023	0.200 ^a	0.0150	0.15	0.02
Two Elk #1	WY	0.090	0.132	0.0135	0.135	0.018
Two Elk #2	WY	0.070	0.084	0.0035	0.15	0.015
Black Hills Power/ Wygen #2	WY	0.070	0.100	0.0100	0.15	0.012
Black Hills Power/ Wygen #3	WY	0.050	0.090		0.15	0.012
Average New Unit Rates		0.072	0.078	0.0056	0.143	0.014
Previous Analysis New Unit Rates		0.090	0.090	0.0022	0.150	0.018
Current Analysis New Unit Rates		0.072	0.078	0.0022	0.143	0.014

Rock permitted emission rates were obtained after the completion of Table 5 and represent a special case of an EGU to be built on tribal lands.

The permitted emission rates were used at their respective permitted EGU. Average emission rates were calculated from these collected emission rates. Three permitted emission rates (i.e., PM₁₀ at Springerville #3 and #4 and SO₂ at Neil Simpson #2) were excluded from the calculation of the average emission rates because they were significant outliers. In addition, the VOC rate (0.0022 lb/MMBtu) used in the previous analysis was used instead of the average calculated VOC rate (0.0056 lb/MMBtu; based upon only about half of the permitted EGUs). The emission rates applied to each of the future allocated EGUs are identified in the bottom row of Table 5.

The emission profile of the future allocated EGUs is presented in Table 6. This emission profile is based upon assumed parameters for a 500 MW EGU operating year-round at 0.85 capacity with a conversion factor of 10 MMBtu/MWh.

Table 6. Emissions Profile for 500 MW Future Allocated Coal-Fired EGU

Facility Name	NO _x	SO ₂	VOC	CO	PM ₁₀
Emission Factors from Table 5 (lb/MMBtu)	0.072	0.078	0.0022	0.143	0.014
Annual Emissions (tpy)	1,340.3	1,452.0	41.3	2,661.9	260.6

Applied BART Limits

With assistance from WRAP staff, ERG collected information on specific BART limits for all coal-fired EGU sources subject to BART in CO, ND, and UT, as well as the Boardman EGU in OR. These were used in place of the 2018 projections in the WRAP 2018 PRP inventory. The information related to BART limits is summarized in Table 7.

In addition to these specific BART limits, the presumptive limit of 0.15 lb of SO₂/MMBtu was applied to all coal-fired EGUs that have been determined to be either subject to BART (but for which a specific limit had not yet been determined) or eligible for BART, according to the WRAP’s latest WRAP BART Clearinghouse.¹² The methodology used to estimate the annual SO₂ emissions based on the presumptive BART rate was to multiply the rate times the 2018 heat input (MMBtu) from U.S. EPA’s CAMD database.¹³ A summary of changes made as a result of applying presumptive BART limits is shown in Table 8.

¹² <http://www.wrapair.org/>

¹³ Listing of 2006 CAMD heat input rates provided by Pat Cummins, WRAP.

Table 7. Summary of BART Limits for Subject Coal Fired EGUs

Facility Name and Unit	2018b Base Case		BART Limits		Changes Due to BART	
	NO _x (tpy)	SO ₂ (tpy)	NO _x (tpy)	SO ₂ (tpy)	NO _x (tpy)	SO ₂ (tpy)
Colorado						
Colorado Springs Utilities – Nixon Unit 1	2,416	4,774	2,331	4,073	-85	-701
Colorado Springs Utilities – Drake Unit 5	838	1,581	752	1,464	-86	-117
Colorado Springs Utilities – Drake Unit 6	1,493	2,999	1,344	566	-149	-2,433
Colorado Springs Utilities – Drake Unit 7	1,918	3,991	2,412	941	+494	-3,050
Public Service – Valmont Unit 5	2,190	709	2,279	879	+89	+170
Public Service – Cherokee Unit 4	3,834	1,457	4,317	1,750	+483	+293
Public Service – Comanche Unit 1	3,090	1,858	2,317	1,856	-773	-2
Public Service – Comanche Unit 2	3,053	1,828	2,587	1,830	-466	+2
Public Service – Hayden Unit 1	4,083	1,234	3,819	1,265	-264	+31
Public Service – Hayden Unit 2	4,018	1,530	3,488	1,633	-530	+103
Public Service – Pawnee Unit 1	4,900	13,700	3,942	2,225	-958	-11,475
Tri-State Generation – Craig Unit 1	4,685	657	5,426	1,066	+741	+409
Tri-State Generation – Craig Unit 2	5,866	1,891	5,548	1,051	-318	-840
Trigen – Colorado Energy Corp Unit 4	464	452	508	733	+44	+281
Trigen Colorado Energy Corp Unit 5	776	987	677	1,891	-99	+904
Change in CO Due to BART					-1,877	-16,425
North Dakota						
Coal Creek – Unit 143	5,186	14,706	4,285	3,781	-901	-10,925
Coal Creek – Unit 144	5,941	12,638	4,104	3,621	-1,837	-9,017
Leland Olds – Unit 121	2,811	17,322	2,661	3,578	-150	-13,744
Leland Olds – Unit 122	10,550	33,531	5,904	3,205	-4,646	-30,326
M.R. Young – Unit 152	9,071	19,997	3,857	2,571	-5,214	-17,426
M.R. Young – Unit 152	14,332	10,160	6,392	5,661	-7,940	-4,499
R.M. Heskett – Unit 154	945	2,754	858	1,660	-87	-1,094
Stanton – Unit 141	2,101	6,296	1,720	1,179	-381	-5,117
Change in ND Due to BART					-21,156	-92,148
Oregon						
Boardman	9,418	14,917	4,960	3,235	-4,458	-11,682
Total Change in OR Due to BART					-4,458	-11,682
Utah						
Hunter – Unit 1	6,564	2,610	4,851	2,239	-1,713	-371
Hunter – Unit 2	6,430	2,477	4,734	2,185	-1,696	-292
Hunter – Unit 3	6,255	950	5,717	1,682	-538	+732
Huntington – Unit 1	5,757	2,693	4,445	2,052	-1,312	-641
Huntington – Unit 2	5,294	13,519	3,776	1,743	-1,518	-11,776
Total Change in UT Due to BART					-6,777	-12,348
Overall Total Change Due to BART					-34,268	-132,603

Table 8. Summary of Presumptive BART Limits for Subject and Eligible Coal-Fired EGUs

Facility Name and Unit	2018b Base Case (tons SO ₂) ^a	Presumptive BART - Rate (lb/MMBtu)	2018 Heat Input (MMBtu)	Presumptive BART-Annual (tons SO ₂)
Alaska – GVEA Healy Power Plant – Unit 1	366	0.15		140
Change in AK Due to Presumptive BART	-226 tons SO₂			
Arizona				
AZ Electric Power Cooperative, Inc. - Apache 2	1,439	0.15	15,248,939	1,144
AZ Electric Power Cooperative, Inc. - Apache 3	1,225	0.15	14,487,789	1,087
Coronado Generating Station – Unit 1B	6,449	0.15	28,551,063	2,141
Coronado Generating Station – Unit 2B	7,030	0.15	31,029,812	2,327
Irvington Generating Station – Unit 4	5,374	0.15	13,393,547	1,005
Change in AZ Due to Presumptive BART	-13,813 tons SO₂			
Montana				
Colstrip Steam Electric Station – Unit 1 ^b	5,517	0.15	29,843,850	2,238
Colstrip Steam Electric Station – Unit 2 ^b	5,640	0.15	29,276,157	2,196
PPL Montana – JE Corette Plant – Unit 2	3,757	0.15	14,895,194	1,160
Change in MT Due to Presumptive BART	-9,320 tons SO₂			
New Mexico				
San Juan Generating Station – Unit 1	2,630	0.15	26,974,922	2,023
San Juan Generating Station – Unit 2	2,677	0.15	27,460,582	2,060
San Juan Generating Station – Unit 3	4,288	0.15	43,863,371	3,290
San Juan Generating Station – Unit 4	4,444	0.15	45,582,346	3,419
Change in NM Due to Presumptive BART	-3,247 tons SO₂			
South Dakota -- Otter Tail Power Company	12,220	0.15	37,111,681	2,783
Change in SD Due to Presumptive BART	-9,437 tons SO₂			
Wyoming				
Basin Electric – Laramie River Station – Unit 1	4,043	0.15	48,061,878	3,605
Basin Electric – Laramie River Station – Unit 2	4,096	0.15	48,607,657	3,646
Basin Electric – Laramie River Station – Unit 3	3,789	0.15	44,354,715	3,327
Pacificorp – Dave Johnston – Unit 3	8,555	0.22 ^c	19,819,756	2,180
Pacificorp – Dave Johnston – Unit 4	4,250	0.15 ^c	30,030,412	2,252
Pacificorp – Jim Bridger – Unit 1	7,069	0.15 ^c	45,621,694	3,422
Pacificorp – Jim Bridger – Unit 2	6,906	0.15 ^c	43,634,528	3,273
Pacificorp – Jim Bridger – Unit 3	6,537	0.15 ^c	46,238,491	3,468
Pacificorp – Jim Bridger – Unit 4	4,107	0.15 ^c	45,075,468	3,381
Pacificorp – Naughton Power Plant – Unit 1	6,518	0.41 ^c	12,813,313	2,627
Pacificorp – Naughton Power Plant – Unit 2	8,694	0.41 ^c	16,715,747	3,427
Pacificorp – Naughton Power Plant – Unit 3	5,980	0.21 ^c	28,425,577	2,985
Pacificorp – Wyodak – Unit 1	8,281	0.32 ^c	35,685,720	5,710
Change in WY Due to Presumptive BART	-35,522 tons SO₂			
U.S. EPA Sources on Navajo Tribal Land located in New Mexico				
Four Corners Power Plant – Unit 1	1,385	0.21 ^d	14,846,431	1,559
Four Corners Power Plant – Unit 2	1,687	0.21 ^d	16,632,804	1,746
Four Corners Power Plant – Unit 3	2,122	0.21 ^d	19,873,582	2,087
Four Corners Power Plant – Unit 4	8,509	0.21 ^d	57,929,739	6,083
Four Corners Power Plant – Unit 5	9,729	0.21 ^d	56,778,871	5,962
Change on Navajo Tribal Land Due to SO₂ Control Levels Proposed by U.S. EPA	-5,995 tons SO₂			

Table 8. Continued

Facility Name and Unit	2018b Base Case (tons SO ₂) ^a	Presumptive BART - Rate (lb/MMBtu)	2018 Heat Input (MMBtu)	Presumptive BART-Annual (tons SO ₂)
Overall Total Change Due to Presumptive BART	-77,560 tons SO₂^e			

^a2018-18b emissions are based on 2004 heat input data from CAMD.

^bColstrip Units 1 and 2 fire on both coal and petroleum coke. The BART limit was applied to the combined heat input for 2018 and will be applied across both SCCs based on a percentage of the 2018-18b emissions.

^cPacificorp unit emission rates are from BART control analysis performed by Pacificorp.

^dEmission rate is based on current U.S. EPA proposal for APS Four Corners. <http://www.epa.gov/fedrgstr/EPA-AIR/2006/September/Day-12/a15097.pdf>

^eTotals may not equal sum of columns due to rounding.

Several EGUs either have permit limits below the presumptive BART limit, or they operated below the presumptive BART level in 2006 (i.e., lb SO₂/MMBtu was calculated using 2006 heat input [MMBtu] and 2006 mass emissions [tons of SO₂]). Therefore no presumptive BART reductions were applied for the 2018 PRP inventory for these BART subject or eligible sources:

- Cholla Power Plant (AZ) Units 1-4, have permitted emission limits based on the use of baghouses and absorbers for SO₂ control; therefore no additional reductions are expected as a result of BART implementation. PRP18 emissions were changed to reflect new permitted limits.
- Navajo Generating Station (U.S. EPA source on Navajo Tribal land, located in northern AZ) Units 1-3, operate at 0.1 lb of SO₂/MMBtu. 2018b emissions were retained for PRP18.
- Reid Gardner (NV) Units 1-3, operate below BART levels (i.e., 0.03 to 0.04 lb SO₂/MMBtu). 2018b emissions were retained for PRP18.
- Mohave Power Plant (NV) Units 1-2, are permitted at 0.15 lb SO₂/MMBtu. 2018b emissions were retained for PRP18.
- TransAlta Centralia Units (WA) BW21 and BW22, operate below BART levels (i.e., 0.04 and 0.05 lb SO₂/MMBtu). PRP18 emissions were calculated based on projected 2018 heat input and current lb SO₂/MMBtu emission rates.

Incorporated ENVIRON Revisions for Oil and Gas Point and Area Sources

Under a separate contract, ENVIRON revised 2018 estimates of SO₂ emissions from selected oil and gas (O&G) point sources and all pollutants (NO_x, SO₂, VOC, CO) for O&G area sources in the WRAP region.¹⁴ ERG incorporated these revised 2018 O&G emissions into the overall database of 2018 point and area source emissions developed for this project, and the revised 2018 O&G emissions are included in the emission summaries proved in the next section.

¹⁴ <http://www.wrapair.org/forums/ssjf/documents/eictts/oilgas.html>

Incorporated Pechan Revisions Related to SO₂ from Sources in §309 States

A study was conducted for the WRAP SSJF in 2006 by Pechan to update the 2018 SO₂ emission projections (originally estimated by ERG and ENVIRON) for purposes of establishing SO₂ milestones for the 309 State Regional Haze State Implementation Plans.¹⁵ The focus of that project was to update some of the projected 2018 version 1 emissions estimates for non-utility sources emitting more than 100 tons of SO₂ in the five milestone states (AZ, NM, UT, WY). (Note that changes by Pechan to sources in OR were made as part of this project, although OR is no longer a §309 state.) The Pechan project resulted in revised 2018 SO₂ emissions from these industries: copper smelters, lime manufacturing, pulp and paper, oil and gas, chemical manufacturing, petroleum refining, and cement production.

For the WRAP PRP18 inventory, ERG summarized the changes from the Pechan report by state, distributed these to the applicable S/L agencies as part of the collection of comments process described above, and requested that each agency confirm these changes. Also, ERG obtained SCC level changes from Pechan, in order to make the detailed changes at the SCC level for this WRAP PRP18 inventory project.¹⁶

Most of the changes described in the Pechan report (Tables III-1 through III-5) were made. However not all of the changes should or could be made for the reasons described below:

- ASARCO-Ray Complex-Copper Smelter and Mill (AZ): the 2018 SO₂ emissions were already changed as part of the adjustment for the 2018b base case to 23,000 tons (not 21,000 as in the Pechan report). The correct value of 23,000 tons was confirmed by Arizona DEQ.
- Phelps Dodge-Miami Smelter (AZ): the 2018 SO₂ emissions were changed to 10,368 tons (not 10,000 as in the Pechan report) based on information provided by Arizona DEQ.

WRAP PRP18 Results (Final) – Summary

Tables 9 and 10 present the WRAP 2018b base case emissions for point and area sources, the net changes made as a result of this project (i.e., total by state), and the resulting draft WRAP PRP18 emissions inventory, at the state/tribal level.

WRAP PRP18 Results (Final) – Detailed Tables

Attachment 1 contains point sources summary tables for each state/tribe, which show the WRAP 2018b base case emissions, the net changes made during this project (i.e., at the facility-, unit-, emission point- or SCC-level), and the resulting final WRAP PRP18 emissions inventory. Tables are provided for each state for point sources (first) and area sources (second). Attachment 2 contains the area source summary changes, which show the WRAP 2018b base case emissions, the net changes made during the project (i.e., SCC-level), and the resulting final WRAP PRP18 emissions inventory.

It should be noted that the records that were deleted are not itemized in these tables. The result of all deletions is shown as a single line item on each table (if applicable), as these were extensive in many

¹⁵ “2018 SO₂ Emissions Evaluation for Non-Utility Point Sources,” Final Report. Prepared for the WRAP Stationary Sources Joint Forum by Pechan. October, 2006. <http://www.wrapair.org/forums/ssjf/documents/eiccts/projections.html>

¹⁶ E-mail from Jim Wilson, Pechan, to Paula Fields, ERG, February 27, 2007.

cases and would have made the length of the tables unmanageable for this memo. The S/L agencies should refer to the comments/responses spreadsheet posted on the WRAP website as a reminder of the records they requested to be deleted and how ERG responded to that request.

2002 Emission Inventory Changes

Although the focus of this project was on the most significant sources in the 2018 inventory projections, many comments were received from the S/L agencies concerning the 2002 emissions. The majority of requested changes affecting emissions were deferred based on guidance from WRAP staff (i.e., these may be addressed during a future emissions inventory update). The 2002 changes that were made fell into these categories:

- Added missing non-CAMD emissions (see “Corrected CAMD EGU Facility IDs and Added Missing Records” above).
- Added and/or changed point source SCCs.
- Changed facility/plant IDs and/or names.
- Fixed tribal codes on some point sources.
- Modified BART flags to reflect status in states that have made definitive findings related to “Subject” and “Not Subject” sources. (Note that prior to completion of the final PRP18 inventory, other flags related to “Eligible” or “Potentially Eligible” sources will be updated to reflect the latest data in WRAP’s BART Clearinghouse.)
- Added new PM₁₀ and PM_{2.5} records for 6 facilities in Nevada. These were also projected to 2018 and added to the PRP18 emissions inventory.
- Added new SO₂ and NO_x records for 1 refinery in Wyoming. These were also projected to 2018 and added to the PRP18 emissions inventory.
- Added new area source fuel combustion emissions in South Dakota.

Attachment 3 includes a list of outstanding issues that were identified during the project but have been deferred until the next inventory update.

Next Steps

In conjunction with this memo, ERG prepared the final PRP18 emissions inventory and developed SMOKE/IDA files that have been submitted to the WRAP RMC. By June 1, 2007, ERG will develop updated PRP18 and 2002 pivot tables (which will be posted on the WRAP Web site and incorporated into the TSS web database), and PRP18 NIF files for subsequent upload to WRAP EDMS.

The WRAP plans to complete two additional regional emissions and modeling analyses to support Western haze planning in late 2007 or early 2008. A final baseline period (2000-04) emissions and modeling analysis will be conducted in conjunction with a final Reasonable Progress 2018 (FRP18) emissions and modeling analysis. The final baseline period analyses will have a limited focus, on correcting inventory errors that affect the Reasonable Progress demonstration, as the inventory from that time period will have been supplanted by more recent and complete data (e.g., see Attachment 3 for some improvements that have already been identified). The associated FRP18 analysis will be completed when the 13 contiguous WRAP states and U.S. EPA are able to provide their permitted emission limits for sources subject to BART requirements. Other remaining 2018 inventory projection corrections will also be applied in those analyses. These final analyses for regional haze planning in the West will be conducted simultaneously.

Table 9. Summary of 2018b Base Case Emissions Inventory, Net Changes Made by State and Resulting WRAP PRP18 Emissions Inventory – Point Sources (Tons per Year)

State	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):							
AK	67,959.43	7,781.59	6,637.31	25,881.08	2,884.91	357.32	1,103.95
AZ	77,738.22	94,407.68	9,466.23	33,242.90	9,893.22	1,644.24	729.29
CA	109,514.89	49,631.75	54,631.70	123,795.15	33,191.68	19,496.84	
CO	112,239.70	69,213.14	98,629.89	58,211.27	28,697.25	306.79	623.03
ID	14,048.16	25,467.31	3,060.02	38,019.05	1,741.19	643.01	1,649.87
MT	62,583.10	45,321.07	10,445.96	62,353.62	11,266.02	691.74	421.68
ND	92,097.99	162,704.76	2,493.21	22,589.46	4,369.38	3,051.53	522.95
NM	74,874.05	41,392.29	26,187.38	57,506.25	3,391.82	1,749.33	123.26
NV	69,016.45	24,040.65	4,112.87	20,745.67	6,200.35	1,534.57	1,172.78
OR	31,760.79	21,686.48	41,168.92	53,654.91	13,517.81	16,659.86	1,016.13
SD	24,725.86	15,268.20	3,522.79	6,858.87	1,044.86	256.93	101.60
UT	96,974.44	52,952.88	13,599.53	98,373.32	18,381.76	5,812.25	2,081.94
WA	49,396.97	51,355.44	28,013.12	187,705.34	12,096.19	4,676.22	5,495.06
WY	132,115.76	145,099.58	27,541.60	60,503.77	42,819.39	19,495.90	810.87
Tribal	92,580.06	32,894.77	2,864.32	12,987.96	7,748.84	3,206.27	125.44
Net Changes to 2018b Base Case Emissions Inventory (TPY):							
AK		-226.34			-1,118.54		
AZ	-4,666.91	-24,070.72	211.84	796.24	984.32	44.41	23.80
CA							
CO	1,120.93	-12,234.64	-21,100.97	5,782.57	-401.45	-211.29	-85.85
ID	-1,675.35	-15,522.06	-41.37	-2,792.25	-335.07	-87.42	-31.09
MT	-217.91	-8,840.88	55.17	1,000.74	-131.79	-246.52	
ND	-21,041.97	-95,626.23	1.79	-1,593.89	1,020.96	-262.26	-61.07
NM	-273.61	-9,011.88	-0.04	-130.31	-74.46	-87.43	-4.94
NV	-1,391.45	4,126.30	-247.12	6,968.94	-164.13	1,058.37	-308.31
OR	-6,813.49	-13,734.49	-530.41	-3,502.51	-433.54	-15,377.31	-184.31
SD	1.00	-9,433.88		0.00			
UT	-17,213.16	-15,014.36	-406.18	-1,920.34	-2,903.88	-1,311.37	-31.44
WA	59.34	-13,911.46	-1,801.03	-80,108.37	-2,370.47	-289.69	-29.27
WY	1,099.95	-49,955.64	728.59	4,278.61	19.80	-328.70	0.00
Tribal	7,922.92	-4,495.17	317.51	572.15	1,293.29	536.03	31.44

Table 9. Continued

State	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP PRP18 Emissions Inventory (TPY):							
AK	67,959.43	7,555.25	6,637.31	25,881.08	1,766.37	357.32	1,103.95
AZ	73,071.31	70,336.96	9,678.07	34,039.14	10,877.54	1,688.65	753.09
CA	109,514.89	49,631.75	54,631.70	123,795.15	33,191.68	19,496.84	
CO	113,360.63	56,978.50	77,528.92	63,993.84	28,295.80	95.50	537.19
ID	12,372.81	9,945.25	3,018.65	35,226.80	1,406.12	555.59	1,618.78
MT	62,365.19	36,480.19	10,501.13	63,354.36	11,134.23	445.22	421.68
ND	71,056.02	67,078.53	2,495.01	20,995.57	5,390.34	2,789.28	461.88
NM	74,600.43	32,380.40	26,187.34	57,375.95	3,317.36	1,661.90	118.32
NV	67,625.00	28,166.95	3,865.76	27,714.61	6,036.22	2,592.94	864.46
OR	24,947.30	7,951.99	40,638.51	50,152.40	13,084.26	1,282.55	831.82
SD	24,726.86	5,834.32	3,522.79	6,858.87	1,044.86	256.93	101.60
UT	79,761.28	37,938.52	13,193.35	96,452.98	15,477.88	4,500.88	2,050.49
WA	49,456.32	37,443.99	26,212.09	107,596.98	9,725.72	4,386.52	5,465.79
WY	133,215.71	95,143.95	28,270.19	64,782.38	42,839.19	19,167.21	810.86
Tribal	100,502.99	28,399.61	3,181.83	13,560.10	9,042.14	3,742.30	156.88

Table 10. Summary of 2018b Base Case Emissions Inventory, Net Changes Made by State and Resulting WRAP PRP18 Emissions Inventory – Area Sources (Tons per Year)

State	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory							
AK	9,293.35	6,043.71	16,539.14	29,055.82	21,531.05	6,877.71	639.23
AZ	12,558.62	3,410.26	171,414.85	70,097.25	137,883.20	39,332.92	9,457.14
CA	117,716.62	9,772.22	357,745.55	384,966.70	190,987.09	84,801.21	
CO	44,040.52	7,498.70	173,092.43	94,594.76	185,238.34	48,422.51	96.76
ID	42,067.89	2,720.52	194,210.06	40,971.48	62,880.57	7,702.74	2,288.40
MT	36,052.99	3,432.14	67,476.71	41,415.20	173,892.25	40,015.47	607.92
ND	21,128.65	5,856.27	82,650.71	21,606.83	311,272.53	64,978.37	462.99
NM	172,318.92	15,753.24	399,205.01	47,997.02	144,289.23	34,664.44	909.55
NV	7,487.60	14,194.42	47,609.85	17,479.33	97,755.67	23,312.88	1,645.65
OR	17,027.19	8,421.88	334,872.12	380,523.74	225,924.68	81,744.55	249.80
SD	7,206.93	11,667.18	50,072.09	25,112.44	226,750.11	48,648.35	502.02
UT	21,635.69	3,586.90	173,344.04	45,962.17	34,279.28	5,760.83	1,679.83
WA	22,745.95	8,667.27	253,709.83	252,446.63	348,329.35	113,984.70	7,021.73
WY	79,196.38	23,109.16	436,884.86	34,463.27	45,027.21	12,435.80	514.06
Tribal	6,639.04	2.08	18,240.28	563.99	2,062.46	412.22	0.07
Net Changes to 2018b Base Case Emissions Inventory							
AK	-115.65	-0.11	-79.74	-0.42			
AZ	240.28	-2.06	-457.15	7,867.05	-1,122.80	291.68	
CA							
CO	5,808.28	2.10	6,581.27	4,673.24			
ID		332.78					
MT	-16,649.19	-1.64	6,553.79	-98.40			
ND	12,191.55	1.33	4,915.99	39.17			
NM	-63,903.42	-4.84	-60,801.51	37,955.98	-2,689.03	-926.94	
NV	-9.20	0.08	5,570.15	-1.23			
OR	-3.99		-5.32	0.06			
SD	-2,203.33	-7,582.58	166.01	-1,025.64	-2,674.01	-491.15	-6.22
UT	-5,700.69	-4.10	-13,395.34	-6.57			
WA							
WY	-25,390.88	-12.16	-99,885.56	4,553.73			
Tribal							

Table 10. Continued

State	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP PRP18 Emissions Inventory							
AK	9,177.70	6,043.60	16,459.40	29,055.40	21,531.10	6,877.70	639.23
AZ	12,798.90	3,408.20	170,957.70	77,964.30	136,760.40	39,624.60	9,457.14
CA	117,716.62	9,772.22	357,745.55	384,966.70	190,987.09	84,801.21	
CO	49,848.80	7,500.80	179,673.70	99,268.00	185,238.30	48,422.50	96.76
ID	42,067.90	3,053.30	194,210.10	40,971.50	62,880.60	7,702.70	2,288.40
MT	19,403.80	3,430.50	74,030.50	41,316.80	173,892.30	40,015.50	607.92
ND	33,320.20	5,857.60	87,566.70	21,646.00	311,272.50	64,978.40	462.99
NM	108,415.50	15,748.40	338,403.50	85,953.00	141,600.20	33,737.50	909.55
NV	7,478.40	14,194.50	53,180.00	17,478.10	97,755.70	23,312.90	1,645.65
OR	17,023.20	8,421.90	334,866.80	380,523.80	225,924.70	81,744.60	249.80
SD	5,003.60	4,084.60	50,238.10	24,086.80	224,076.10	48,157.20	495.80
UT	15,935.00	3,582.80	159,948.70	45,955.60	34,279.30	5,760.80	1,679.83
WA	22,745.95	8,667.27	253,709.83	252,446.63	348,329.35	113,984.70	7,021.73
WY	53,805.50	23,097.00	336,999.30	39,017.00	45,027.20	12,435.80	514.06
Tribal	6,639.04	2.08	18,240.28	563.99	2,062.46	412.22	0.07

ATTACHMENT 1:
WRAP PRP18 EMISSIONS INVENTORY - FINAL
STATE SUMMARY TABLES
POINT SOURCES

These results incorporate changes made as a result of:

- Comments received from state/local agencies. See page 3 of this memo and comments/responses table for more details:<http://www.wrapair.org/forums/ssjf/documents/eictts/projections.html>)
- Addition of NO_x and SO₂ records for non-CAMD units operating at facilities with CAMD units. These had been dropped from the NEI, which was the basis for the WRAP 2018b inventory. See page 4 of this memo for details.
- Revised EGU projections to incorporate changes to the number and location of future coal-fired EGUs projected to begin operation by 2018 in North Dakota, Idaho, and the Navajo Tribal Lands. Also, emission rates for NO_x, SO₂, CO, and PM₁₀ at all future EGUs were revised based on recently permitted coal-fired EGUs. See pages 4-8 of this memo for details.
- Application of BART limits to coal-fired EGUs in Colorado, North Dakota, Utah, and Oregon. See pages 8-9 of this memo for details.
- Application of presumptive BART limits for SO₂ for coal-fired EGUs in Alaska, Arizona, Montana, New Mexico, South Dakota, Wyoming, and U.S. EPA sources on Navajo Tribal Land located in New Mexico. See pages 8-11 of this memo for details.
- Changes by ENVIRON to the SO₂ oil and gas point source emissions in Wyoming and New Mexico. See page 11 of this memo for more information.
- Changes made to significant non-EGU SO₂ emitters (i.e., >100 TPY) as a result of an update by Pechan for the §309 states (i.e., Arizona, New Mexico, Utah, Wyoming) and Oregon. See page 12 of this memo and Pechan report for more details:
<http://www.wrapair.org/forums/ssjf/documents/eictts/projections.html>

Alaska – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY)													
All							67,959.4	7,781.6	6,637.3	25,881.1	2,884.9	357.3	1,104.0
Net Changes to 2018-18b Emissions Inventory (TPY)													
2068	229000003	US Air Force - Clear Air Force Station	11A	10100224		1					-14.4		
2068	229000003	US Air Force - Clear Air Force Station	22A	10100224		2					-13.1		
2068	229000003	US Air Force - Clear Air Force Station	33A	10100224		3					-20.0		
2090	209000001	Eielson Air Force Base	11A	10100224		1					-91.8		
2090	209000001	Eielson Air Force Base	22A	10100224		2					-78.3		
2090	209000001	Eielson Air Force Base	33A	10100224		3					-87.3		
2090	209000001	Eielson Air Force Base	44A	10100224		4					-99.1		
2090	209000001	Eielson Air Force Base	55A	10100224		5					-42.5		
2090	209000001	Eielson Air Force Base	66A	10100224		6					-49.2		
2090	209000004	US Army Fort Wainwright	33A	10100224		3					-84.1		
2090	209000004	US Army Fort Wainwright	44A	10100224		4					-71.0		
2090	209000004	US Army Fort Wainwright	55A	10100224		5					-104.3		
2090	209000004	US Army Fort Wainwright	66A	10100224		6					-150.8		
2090	209000002	Aurora Energy	33A	10100224		3					-132.3		
2090	209000002	Aurora Energy	44A	10100225		4					-33.6		
2090	209000002	Aurora Energy	55A	10100225		5					-37.1		
2090	209000002	Aurora Energy	66A	10100224		6					-9.6		
2090	0229000002	GVEA Healy Power Plant	11A			1		-226.3					
WRAP 2018 PRP Emissions Inventory (TPY)													
All							67,959.4	7,555.3	6,637.3	25,881.1	1,66.4	1,766.4	1,104.0

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Arizona – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):													
All							77,738.2	94,407.7	9,466.2	33,242.9	9,893.2	1,644.2	729.3
Net Changes to 2018-18b Emissions Inventory (TPY):													
04001	0400100059	SALT RIVER PROJECT						15.6					
04001	040013222	TUCSON ELECTRIC POWER CO-SPRINGERVILLE					-2,322.1	-2,405.6	3.2	14.9	1,128.8	294.5	
04001	040014477	CORONADO GENERATING STATION						-9,010.5					
04001	PRJEGU03	Future Coal EGU (A)					-335.1	-223.4	0.0	-130.3	-74.5	-87.4	
04003	0400300037	AZ ELECTRIC POWER COOPERATIVE INC					145.5	0.4					
04003	040032148	DOUGLAS LIME PLANT						979.8					
04003	040033532	AZ ELECTRIC POWER COOPERATIVE INC						-433.0					
04003	PRJEGU04	Future Coal EGU (B)					-335.1	-223.4	0.0	-130.3	-74.5	-87.4	
04007	0400701391	PHELPS DODGE - MIAMI SMELTER						2,356.8					
04013	3316	SRP AGUA FRIA GENERATING STATION					138.7	0.4					
04013	3317	KYRENE GENERATING STATION					2.0	0.3					
04017	040171807	SNOWFLAKE PULP MILL						-62.5					
04017	0401734839	Snowflake White Mountain Power					240.0	225.0	22.0	225.0	49.0		
04017	04017447	CHOLLA POWER PLANT					-2,570.8	-11,492.5					
04019	040192869	ARIZONA PORTLAND CEMENT COMPANY						128.0					
04019	EGU0047	IRVINGTON GENERATING STATION						-4,369.4					
04021	V20621 000	Cactus Waste Systems (landfill)							12.8		-145.0		
04025	040252393	PHOENIX CEMENT						-83.6					
04025	040255992	NELSON LIME PLANT						291.1					
04027		Arizona Clean Fuels Refinery					395.5	250.7	175.2	817.0	175.7		23.8
Deleted Records							-25.6	-15.0	-1.3		-75.3	-75.3	
WRAP 2018 PRP Emissions Inventory (TPY):													
All							73,071.3	70,337.0	9,678.1	34,039.1	10,877.5	1,688.7	753.1

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California – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY)													
All							109,514.9	49,631.8	54,631.7	123,795.2	33,191.7	19,496.8	
Net Changes to 2018b Base Case Emissions Inventory (TPY)													
No Changes													
WRAP PRP18 Emissions Inventory (TPY)													
All							109,514.9	49,631.8	54,631.7	123,795.2	33,191.7	19,496.8	

Colorado – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):													
All							112,239.7	69,213.1	98,629.9	58,211.3	28,697.3	306.8	623.0
Net Changes to 2018-18b Emissions Inventory (TPY):													
All					40400311				-21,239.1				
08041	0030	COLORADO SPRINGS UTILITIES - NIXON PLT	1	222	10100222	222	-84.6	-700.8					
08041	0030	COLORADO SPRINGS UTILITIES - NIXON PLT	002	01	10100501	002	5.5	1.8					
08041	0004	COLORADO SPRINGS UTILITIES-DRAKE PLT	6	222	10100222	222	-148.9	-2,433.4					
08041	0004	COLORADO SPRINGS UTILITIES-DRAKE PLT	5	222	10100222	222	-85.9	-116.9					
08041	0004	COLORADO SPRINGS UTILITIES-DRAKE PLT	7	222	10100222	222	493.8	-3,050.3					
08099	PRJEGU07	Future Coal EGU (A)	#1	01	10100201	01	-335.1	-223.4	0.0	-130.3	-74.5	-87.4	
08121		Future Coal EGU (Akron/ AES Power)	#1	01	10100201	01	1,667.9	2,382.7	52.9	3,407.3	285.9		
08087	PRJEGU06	Future Coal EGU (B)	#1	01	10100201	01	-335.1	-223.4	0.0	-130.3	-74.5	-87.4	
08087		Future Coal EGU (Ft. Morgan/ LS Power)	#1	01	10100201	01	1,563.7	1,742.4	49.6	3,194.3	268.1		
08031	0008	PUBLIC SERVICE CO - ARAPAHOE	019	01	20100101	019	12.4	0.6					
08031	0008	PUBLIC SERVICE CO - ARAPAHOE	018	01	20100102	018	6.3	0.1					
08031	0008	PUBLIC SERVICE CO - ARAPAHOE	012	01	20100102	012	3.4	0.2					
08031	0008	PUBLIC SERVICE CO - ARAPAHOE	014	01	20100201	014	39.0	0.6					
08013	0001	PUBLIC SERVICE CO - VALMONT	5	226	10100226	226	88.7	170.3					
08013	0001	PUBLIC SERVICE CO - VALMONT	003	01	10200602	003	3.5	0.0					
08013	0001	PUBLIC SERVICE CO - VALMONT	013	01	20100201	013	39.0	0.3					
08013	0001	PUBLIC SERVICE CO - VALMONT	002	01	20100201	002	12.1	0.4					
08077	0002	PUBLIC SERVICE CO CAMEO PLT	001	01	10100222	001	657.4	964.1					
08001	0001	PUBLIC SERVICE CO CHEROKEE PLT	4	226	10100226	226	482.7	293.4					
08001	0001	PUBLIC SERVICE CO CHEROKEE PLT	006	01	20100102	006	4.1	0.6					
08001	0001	PUBLIC SERVICE CO CHEROKEE PLT	017	01	20100102	017	3.6	0.6					
08101	0003	PUBLIC SERVICE CO COMANCHE PLT	#3 Fut	1	10100201	01	-366.2	-457.8	35.7	-558.5	-139.6	-36.4	
08101	0003	PUBLIC SERVICE CO COMANCHE PLT	2	222	10100222	222	-466.1	2.0					
08101	0003	PUBLIC SERVICE CO COMANCHE PLT	1	226	10100226	226	-772.9	-1.7					
08123	0023	PUBLIC SERVICE CO FORT SAINT VRAIN PLT	001	02	10100602	001	16.0	0.1					
08107	0001	PUBLIC SERVICE CO HAYDEN PLT	H1	222	10100222	222	-263.7	31.2					
08107	0001	PUBLIC SERVICE CO HAYDEN PLT	H2	226	10100226	226	-530.4	102.8					
08087	0011	PUBLIC SERVICE CO PAWNEE PLT	1	222	10100222	222	-957.7	-11,475.5					
08087	0011	PUBLIC SERVICE CO PAWNEE PLT	002	02	10200601	002	0.1	0.0					
08081	0018	TRI STATE GENERATION CRAIG	C2	222	10100222	222	-317.9	-839.9					
08081	0018	TRI STATE GENERATION CRAIG	C1	222	10100222	222	741.4	408.8					
08085	0001	TRI STATE GENERATION NUCLA	009	01	10101002	009	0.0						

Colorado – Point Sources Continued

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
08059	0820	TRIGEN - COLORADO ENERGY CORPORATION	4	2	10200222	4	43.9	281.1					
08059	0820	TRIGEN - COLORADO ENERGY CORPORATION	5	2	10200222	6	-98.9	904.3					
08049	0006	CLIMAX MOLYBDENUM AMAX HENDERSON MILL	ALL								-666.9		
Deleted Records													-85.8
WRAP 2018 PRP Emissions Inventory (TPY):													
All							113,360.6	56,978.5	77,528.9	63,993.8	28,295.8	95.5	537.2

Idaho – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):													
All							14,048.2	25,467.3	3,060.0	38,019.0	1,741.2	643.0	1,649.9
Net Changes to 2018-18b Emissions Inventory (TPY):													
16029	02900001	P4 Production LLC	10	1	30111299	10		-14,169.9					
16051	05100017	Idaho Fresh Pak, Lewisville	10	2	10200501	10		119.9					
16011	01100013	Idaho Supreme Potatoes	10	2	10200401	10		203.3					
Deleted Records							-1,675.4	-1,675.4	-41.4	-2,792.3	-335.1	-87.4	-31.0
WRAP 2018 PRP Emissions Inventory (TPY):													
All							12,372.8	9,945.2	3,018.7	35,226.8	1,406.1	555.6	1,618.8

Montana – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):													
All							62,583.1	45,321.1	10,446.0	62,353.6	11,266.0	691.7	421.7
Net Changes to 2018-18b Emissions Inventory (TPY):													
30087	087-0008	COLSTRIP STEAM ELECTRIC STATION	1	226	10100226	226		-2,557.0					
30087	087-0008	COLSTRIP STEAM ELECTRIC STATION	1	801	10100801	801		-721.2					
30087	087-0008	COLSTRIP STEAM ELECTRIC STATION	2	226	10100226	226		-2,804.0					
30087	087-0008	COLSTRIP STEAM ELECTRIC STATION	2	801	10100801	801		-640.2					
30087	087-0008	COLSTRIP STEAM ELECTRIC STATION	8	1	20100107		1.0						
30111	111-0015	PPL MONTANA - JE CORETTE PLANT	2	226	10100226	226		-2,596.5					
30013	PRJEGU10	Future Coal EGU (A)	#1	1	10100201	1	-335.1	-223.4	0.0	-130.3	-74.5	-87.4	
30065	PRJEGU11	Future Coal EGU (Bull Mountain - Roundup Plant)	#1	1	10100201	1	-1,496.6	-1,061.1	-18.5	-2,010.4	-328.4	-131.1	
30065	PRJEGU11	Future Coal EGU (Bull Mountain - Roundup Plant)	#2	1	10100201	1	1,016.4	1,452.0	43.6	2,178.0	174.2		
30003	PRJEGU09	Future Coal EGU (Rocky Mountain Power - Hardin Generating Station)	#1	1	10100201	1	-107.2	-71.5	0.0	-41.7	-23.8	-28.0	
30013		Future Coal EGU (Highwood/ Southern Montana Electric)	#1	1	10100201	1	703.6	382.0	30.2	1,005.2	120.6		
WRAP 2018 PRP Emissions Inventory (TPY):													
All							62,365.2	36,480.2	10,501.1	63,354.4	11,134.2	445.2	421.7

Nevada – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):													
All							69,016.5	24,040.6	4,112.9	20,745.7	6,200.3	1,534.6	1,172.8
Net Changes to 2018-18b Emissions Inventory (TPY):													
32001	AP49110197	AMOR IV CORP & STILLWATER GEOTHERMAL	1071	1135	20101001	1135			-165.1				
32001	AP49110464	AMOR IX CORPORATION	1844	1997	20101001	1997			-81.3				
32001	AP49110464	AMOR IX CORPORATION	1847	2000	20101001	2000			-97.9				
32003	AP49110399	Nevada Power Sunrise Station			103006						12.6		
32003	AP49110400	NEVADA POWER COMPANY- Reid Gardner Generating Station			101002						722.0	599.2	
32003	AP49110466	So Cal Edison - Mohave	1848	2001	10100212	2001			10.9	83.4	-559.0		
32003	AP49110466	So Cal Edison - Mohave	1849	2002	10100212	2002			12.3	93.4	-647.4		
32003	AP49110466	So Cal Edison - Mohave	1850	2003	10100212	2003	0.6	0.0	0.0	0.1	0.0		
32003	AP49110466	So Cal Edison - Mohave	1851	2004	10100212	2004	1.1	0.0	0.0	0.1	0.0		
32003	AP49110466	So Cal Edison - Mohave			10100212							846.9	
32011	PRJEGU15	Future Coal EGU (Newmont - Northern Nevada Energy)	#1	01	10100201	01	-171.3		0.0		-44.7	-35.0	
32019	AP32410387	NEVADA CEMENT COMPANY	1534	1629	30501109	1629	-5.5						
32019	AP32410387	NEVADA CEMENT COMPANY	1537	1632	30501109	1632	-1,791.6						
32019	AP32410387	NEVADA CEMENT COMPANY	1540	1635	30501109	1635	-3.7						
32019	AP32410387	NEVADA CEMENT COMPANY	1543	1638	30501109	1638	-891.5						
32033		Future Coal EGU (White Pine Energy Association/ LS Power)	#1	01	10100201	01	3,909.2	4,355.9	124.0	7,985.8	670.1		
32033	PRJEGU16	Future Coal EGU (A)	#1	01	10100201	01	-335.1	-223.4	0.0	-130.3	-74.5	-87.4	
32003	423	Nevada Sun Peak Partnerships*					78.8	0.1	1.7	6.0	0.2		
32019	AP49110091	Sierra Pacific Company - Ft Churchill Power Station*									57.9	10.9	
32019	AP32410387	Nevada Cement Company*									142.5	42.8	
32029	AP49110194	Sierra Pacific Company - Tracy Generating Station*									31.2	26.7	
Deleted Records							-2,182.5	-6.4	-51.6	-1,069.5	-474.9	-345.7	-308.3
WRAP 2018 PRP Emissions Inventory (TPY):													
All							67,625.0	28,166.9	3,865.8	27,714.6	6,036.2	2,592.9	864.5

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* These records (complete facilities or certain units only) earlier had missing FIPS codes and so were not included in the state totals in 2018b base case.

New Mexico – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):													
All							74,874.0	41,392.3	26,187.4	57,506.3	3,391.8	1,749.3	123.3
Net Changes to 2018-18b Emissions Inventory (TPY):													
35001	00008	Rio Grande Portland Cement						409.2					
35001	00011	Public Service Company of New Mexico Reeves Generating Station					0.1	0.0					-4.9
35015	350150008	Indian Basin Gas Plant						-1,662.4					
35015	350150010	Artesia Refinery						11.2					
35015	350150011	Artesia Gas Plant						-1,115.7					
35015	350150285	Dagger Draw Gas Plant						18.0					
35025	350250004	Maljamar Gas Plant						200.1					
35025	350250007	Denton Plant						-104.4					
35025	350250008	Jal No. 3						-401.5					
35025	350250034	Maddox Station					51.3	0.0					
35025	350250035	Linam Ranch Gas Plant						-1,230.2					
35025	350250044	Eunice Gas Plant						-1,745.4					
35025	350250054	Cunningham Station					0.4	0.0					
35025	350250060	Eunice Gas Plant						25.0					
35025	350250061	Monument Plant						298.4					
35025	350250063	Saunders Plant						38.3					
35031	350310008	Ciniza Refinery						-292.8					
35031	350310032	Escalante Station					7.1	0.0					
35031	PRJEGU18	Future Coal EGU (A)					-335.1	-223.4	0.0	-130.3	-74.5	-87.4	
35045	350450023	San Juan Refinery (Bloomfield)						34.8					
35045	350450247	San Juan River Gas Plant						-24.9					
35045	350450902	San Juan Generating Station					2.6	-3,246.5					
WRAP 2018 PRP Emissions Inventory (TPY):													
All							74,600.4	32,380.4	26,187.3	57,375.9	3,317.4	1,661.9	118.3

North Dakota – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):													
All							92,098.0	162,704.8	2,493.2	22,589.5	4,369.4	3,051.5	523.0
Net Changes to 2018-18b Emissions Inventory (TPY):													
38053	16	Grasslands Plant						300.0					
38055	126	Coal Creek Station					-2,738.2	-19,941.5					
38057	13	Antelope Valley Station									640.0		
38057	289	Coyote									410.0		
38057	65	Great Plains Synfuel Plant									280.0		
38057	12	Leland Olds Station					-4,796.6	-44,070.4					
38057	125	Stanton Station					-381.0	-5,117.2					
38059	226	Mandan Refinery									110.0		
38059	172	RM Heskett Station - Mandan					-86.7	-1,094.0			60.0		
38065	165	M R Young Station					-13,153.4	-21,925.3					
38105	270	Tioga Gas Plant					981.7	-981.7					
38093		Future Coal EGU (Great River Energy)					221.1	147.4	5.5	351.4	31.9		
38011		Future Coal EGU (Gascoyne/Montana Dakota Utility)					2,261.7	1,364.5	73.9	3,639.2	308.1		
38089		Future Coal EGU (South Heart/Great Northern Power)					1,675.4	726.0	46.5	2,792.3	186.2		
Deleted Records							-5,026.1	-5,034.0	-124.1	-8,376.8	-1,005.2	-262.3	-61.1
WRAP 2018 PRP Emissions Inventory (TPY):													
All							71,056.0	67,078.5	2,495.0	20,995.6	5,390.3	2,789.3	461.9

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Oregon – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):													
All							31,760.8	21,686.5	41,168.9	53,654.9	13,517.8	16,659.9	1,016.1
Net Changes to 2018-18b Emissions Inventory (TPY):													
41001	00038	Northwest Pipeline Corporation											-0.0
41003	02298	Oregon State University											-0.2
41005	01850	Blue Heron Paper Company									-0.0		-0.1
41005	02145	West Linn Paper Company						319.6					-0.1
41007	00004	Fort James Operating Company						-559.3					-0.2
41009	01849	Boise Cascade Corporation						-574.9					-0.5
41029	00025	Timber Products Co.											-0.1
41033	00030	U.S. Forest Industries, Inc.											-0.0
41035	00093	Aqua Glass West, Inc.											-0.0
41041	00005	Georgia-Pacific West, Inc.						-162.8					-0.3
41043	06024	Entek International LLC											-0.1
41043	03501	Pope & Talbot, Inc.						-46.8					-0.2
41043	00547	Wah Chang											-0.1
41043	00471	Weyerhaeuser Company						-136.9					-0.2
41049	00016	Portland General Electric Company					-4,456.4	-11,678.4					
41049	00031	Portland General Electric Company					2.8	2.8					
41051	02025	Chevron Products Company											-0.1
41051	03009	Dynea Overlays, Inc.											-0.0
41051	02050	Oregon Health Sciences University											-0.1
41051	01876	Owens-Brockway Glass Container Inc.						0.0					-72.4
41059	30-0118	Hermiston Power Plant					79.9	23.7	19.6	-351.9	115.8		
41071	06142	Smurfit Newsprint Corporation						-314.7					-0.1
Deleted Records							-2,439.8	-606.9	-550.0	-3,150.6	-549.3	-15,302.8	-184.3
WRAP 2018 PRP Emissions Inventory (TPY):													
All							24,947.3	7,952.0	40,638.5	50,152.4	13,084.3	1,282.5	831.8

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South Dakota – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):													
All							24,725.9	15,268.2	3,522.8	6,858.9	1,044.9	256.9	101.6
Net Changes to 2018-18b Emissions Inventory (TPY):													
46051	28.0801-29	Otter Tail Power Company	1	223	10100223	223		-9,436.8					
46051	28.0801-29	Otter Tail Power Company	4	1	20100101	4	0.1	0.0					
46051	28.0801-29	Otter Tail Power Company	3	1	10100501	3	0.0	0.1	0.1				
46051	28.0801-29	Otter Tail Power Company	2	1	10100501	2	0.9	2.7					
WRAP 2018 PRP Emissions Inventory (TPY):													
All							24,726.9	5,834.3	3,522.8	6,858.9	1,044.9	256.9	101.6

Utah – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):													
All							96,974.4	52,952.9	13,599.5	98,373.3	18,381.8	5,812.3	2,081.9
Net Changes to 2018-18b Emissions Inventory (TPY):													
49007	10081	Carbon Power Plant					1.5	0.5					
49011	10119	Salt Lake Refinery						35.5					
49011	10122	Flying J Refinery (Big West Oil Co.)						-82.5					
49011	10123	Phillips Refinery						17.6					
49015	10237	Hunter Power Plant					-3,936.4	71.0			-177.0		
49015	10238	Huntington Power Plant					-2,815.2	-12,403.5			-413.0		
49015	PRJEGU22	Future Coal EGU (A)					-335.1	-223.4	-0.0	-130.3	-74.5	-87.4	
49027	10313	Cricket Mountain Plant						0.00					
49027	10327	Intermountain Generation Station					-705.1		16.9		-212.2	-55.4	
49029	10007	Devil's Slide Plant						-13.9					
49035	10335	Salt Lake City Refinery						-128.2					
49035	10355	Gadsby Power Plant					0.5	0.0					
49041	PRJEGU24	Future Coal EGU (NEVCO Energy Co.)					100.5	-683.5	-0.0	-351.8	-26.1	-47.2	
49047	PRJEGU25	Future Coal EGU (B)					-335.1	-223.4	-0.0	-130.3	-74.5	-87.4	
Deleted Records							-9,188.9	-1,380.6	-423.0	-1,307.9	-1,926.6	-1,034.0	-31.4
WRAP 2018 PRP Emissions Inventory (TPY):													
All							79,761.3	37,938.5	13,193.4	96,453.0	15,477.9	4,500.9	2,050.5

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Washington – Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):													
All							49,397.0	51,355.4	28,013.1	187,705.3	12,096.2	4,676.2	5,495.1
Net Changes to 2018-18b Emissions Inventory (TPY):													
53007	0001	ALUMINUM CO OF AMERICA WENATCHEE WORKS					-40.8	-2,134.7	-7.3	-11,431.0	-121.4		
53015	0015	LONGVIEW ALUMINUM, L.L.C.					1.0			1.0	3.0	3.0	0.7
53015	0144	Mint Farm Energy Center LLC					97.3	82.6	44.0	68.8	97.9	96.9	
53039	0001	GOLDENDALE ALUMINUM					-44.4	-305.5	-28.9	-12,811.1	-170.7	-62.8	
53041	New Plant	Cardinal FG					831.2	72.5	56.1	772.0	20.19	101.4	
53041	0010	TransAlta Centralia Generation					8.6	-3,884.2					
53073	0001	INTALCO ALUMINUM CORP FERNDALE					-55.9	-3,339.9	-16.8	-24,644.9	-507.7	-72.6	
Deleted Records							-737.7	-4,402.3	-1,848.2	-32,063.2	-1,691.7	-355.6	-29.9
WRAP 2018 PRP Emissions Inventory (TPY):													
All							49,456.3	37,444.0	26,212.1	107,597.0	9,725.7	4,386.5	5,465.8

Wyoming - Point Sources

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):													
All							132,115.8	145,099.6	27,541.6	60,503.8	42,819.4	19,495.9	810.9
Net Changes to 2018-18b Emissions Inventory (TPY):													
56001	5600100002	MOUNTAIN CEMENT CO						-2.1					
56003	5600300003	AMERICAN COLLOID CO_LOVELL					179.7	14.8			-120.3		
56005	5600500046	PACIFICORP_WYODAK						-2,571.0					
56005	5600500063	BLACK HILLS CORPORATION_SIMPSON 2						1.9					
56005		Future Coal EGU (Dry Fork/ Basin Electric)					785.6	1,256.9	61.3	2,356.7	188.5		
56005	PRJEGU28	Future Coal EGU (Wygen Station)					111.7	372.3	37.2	558.5	22.3		
56005	PRJEGU29	Future Coal EGU (Two Elk)					1,928.5	2,752.0	214.0	3,976.2	413.3		
56005	PRJEGU30	Future Coal EGU (A)					-335.1	-223.4	-0.0	-130.3	-74.5		
56007	5600700001	SINCLAIR OIL CORP-SINCLAIR REFINERY						-993.8					
56009	5600900001	PACIFICORP_DAVE JOHNSTON					4.7	-8,370.8					
56013	5601300008	DEVON SFS OPERATING_BEAVER CREEK						-16.0					
56013	5601300028	BURLINGTON RESOURCES_LOST CABIN						-791.6					
56021	5602100001	FRONTIER REFINING, INC.						-672.4					
56023	5602300004	PACIFICORP_NAUGHTON POWER PLANT						-12,132.7					
56023	5602300013	EXXON SHUTE CREEK I						-2,669.7					
56025	5602500005	SINCLAIR REFINERY - CASPER						-223.3					
56029	5602900007	MARATHON OIL CO _ OREGON BASIN GAS PLANT						200.4					
56029	5602900012	HOWELL PET CORP_ELK BASIN GAS PLANT						-324.7					
56031	5603100001	BASIN ELECTRIC_LARAMIE RIVER STATION						-1,350.7					
56035	00001	EXXON -LABARGE DEHYDRATION FACILITY						-696.5					
56037	5603700002	GENERAL CHEMICAL						209.3					
56037	5603700008	UNION PAC_BRADY						-41.2					
56037	5603700022	Simplot Phosphates						-758.8					
56037	5603700048	FMC CORP_GREEN RIVER PLANT_SODIUM PROD						-57.0					
56037	5603701002	PACIFICORP_JIM BRIDGER					11.4	-11,069.7					

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Wyoming - Point Sources Continued)

State County FIPS	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
56037	PRJEGU32	Future Coal EGU (B)					-335.1	-223.4	0.0	-130.3	-74.5		
56041	5604100009	CHEVRON CARTER CREEK						-715.9					
56041	5604100012	BP AMERICA - WHITNEY CANYON						-9,171.5					
56043	5604300003	HILAND PARTNERS, LLC_HILAND GAS PLANT						-66.8					
56045	5604500001	WYOMING REFINING CO_NEWCASTLE REFINERY						313.1					
56005	0083	Western Gas Resources - Horse Creek/Gas Draw Compressor Stn.*					19.7		9.2	24.3			
56005	0120	Western Gas Resources - Baker Springs/Butcher Compressor Stn.*					33.2		8.0	87.3			
56005	0134	Western Gas Resources - Pronghorn/Oryn Compressor Stn.*					38.5		49.3	70.9			
56005	0137	Western Gas Resources - Sioux/Jr. Reno Compressor Stn.*					29.7		1.3	77.4			
56035	0018	Jonah Gas Gathering - Falcon Compressor Stn.*					126.6		143.5	97.8			
56035	0020	Jonah Gas Gathering - Bird Canyon/Co. Line Compressor Stn.*					132.7		156.3	65.5			
56035	0034	Jonah Gas Gathering - Luman Compressor Stn.*					95.2		178.2	69.5			
Deleted Records							-1,727.0	-1,933.1	-129.5	-2,844.9	-335.1	-328.7	0.0
WRAP 2018 PRP Emissions Inventory (TPY):													
All							133,215.7	95,143.9	28,270.2	64,782.4	42,839.2	19,167.2	810.9

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* These records (complete facilities or certain units only) earlier had missing FIPS codes and so were not included in the state totals for the 2018b base case.

Tribal – Point Sources

State County FIPS	Tribal Code	Facility ID	Facility Name	Emission Unit ID	Process ID	SCC	Emission Release Point ID	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018-18b Emissions Inventory (TPY):														
All								92,580.1	32,894.8	2,864.3	12,988.0	7,748.8	3,206.3	125.4
Net Changes to 2018-18b Emissions Inventory (TPY):														
00000	687	10747	BONANZA POWER PLANT					7,850.7	1,265.1	62.8	523.4	680.9	562.8	31.4
00000	687	10766	Riverbend Field					55.6	0.3	83.5	53.0	177.3	148.1	
00000	780	350450002	Four Corners Power Plant						-5,994.6					
00000	780		Future Coal EGU (Desert Rock/Sithe Global Power)					3,315.6	3,315.6	165.8	5,527.6	1,105.2		
00000	281	00011	Devon Energy Riverton Dome Plant					51.7	269.1	88.2	52.6			
Deleted Records								-3,350.7	-3,350.7	-82.7	-5,584.5	-670.1	-174.8	
WRAP 2018 PRP Emissions Inventory (TPY):														
All								100,503.0	28,399.6	3,181.8	13,560.1	9,042.1	3,742.3	156.9

ATTACHMENT 2:
WRAP PRP18 EMISSIONS INVENTORY - DRAFT
STATE SUMMARY TABLES
AREA SOURCES

These results incorporate changes made as a result of:

- Comments received from state/local agencies. See page 3 of this memo and comments/responses table for more details: <http://www.wrapair.org/forums/ssjf/documents/eictts/projections.html>)
- Changes by ENVIRON to the area source oil and gas emissions in Alaska, Arizona, Colorado, Montana, North Dakota, New Mexico, Nevada, Oregon, South Dakota, Utah and Wyoming. See page 11 of this memo for more information.

Alaska – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
Alaska	All	9,293.4	6,043.7	16,539.1	29,055.8	21,531.1	6,877.7	639.2
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
Alaska	2310000220- Oil and Gas Production: Drill rigs	-114.1	-0.1					
Alaska	2310021500- Oil and Gas Production: Natural Gas well completion – flaring and venting	-1.6		-79.7	-0.4			
WRAP PRP18 Emissions Inventory (TPY):								
Alaska		9,177.7	6,043.6	16,459.4	29,055.4	21,531.1	6,877.7	639.2

Arizona – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
Arizona	All	12,558.6	3,410.3	171,414.9	70,097.3	137,883.2	39,332.9	9,457.1
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
Arizona	2310010100- Oil and Gas Production: Crude Petroleum Oil well heaters	0.2		0.0	0.0			
Arizona	2310010200- Oil and Gas Production: Crude Petroleum Oil well tanks - flashing & standing/working/breathing			16.0				
Arizona	2310010300- Oil and Gas Production: Crude Petroleum Oil well pneumatic devices			3.6				
Arizona	2310020600- Oil and Gas Production: Natural Gas Compressor engines	7.8		0.0				
Arizona	2310021100- Oil and Gas Production: Natural Gas well heaters	7.4		0.0	1.6			
Arizona	2310021300- Oil and Gas Production: Natural Gas well pneumatic devices			1.7				
Arizona	2310021400- Oil and Gas Production: Natural Gas well dehydrators			10.6				
Arizona	2310030210- Oil and Gas Production: Natural Gas Liquids Gas well tanks - Flashing & Standing/Working/Breathing			16.9				
Arizona	2311000000- Construction: All Processes					-779.1	-155.8	
Arizona	2311000100- Construction: All Processes, Wind Erosion					-1,121.3	-333.7	
Arizona	2460100000- Consumer and Commercial- All Personal Care Products Total			-229.5				
Arizona	2460200000- Consumer and Commercial- All Household Products Total			-102.0				
Arizona	2460400000- Consumer and Commercial- All Automotive Aftermarket Products Total			-35.3				
Arizona	2460500000- Consumer and Commercial- All Coatings and Related Products Total			-97.2				
Arizona	2460600000- Consumer and Commercial- All Adhesives and Sealants Total: All Solvents			-57.0				
Arizona	2460800000- Consumer and Commercial- All FIFRA Related Products Total			-179.6				
Arizona	2460900000- Consumer and Commercial Miscellaneous Products (Not Otherwise Covered) Total			-7.2				
Arizona	2461800000- Commercial Pesticide Application: All Processes Total			602.1				
Arizona	2465000000- Consumer Solvents- All Products/Processes Total			-2.0				
Arizona	2465100000- Consumer Solvents- Personal Care Products Total			-125.7				
Arizona	2465200000- Consumer Solvents- Household Products Total			-137.1				
Arizona	2465400000- Consumer Solvents- Automotive Aftermarket Products Total			-315.7				
Arizona	2465600000- Consumer Solvents- Adhesives and Sealants Total			-302.6				
Arizona	2465800000- Consumer Solvents- Pesticide Application Total			13.5				
Arizona	2601000000- On-site Incineration All Categories Total	-1.2	0.0	-0.0	-0.0	-0.0	-0.0	
Arizona	2610000100- Open Burning All Categories Yard Waste - Leaf Species Unspecified			-3.4	-13.5	-4.6	-4.6	
Arizona	2610000400- Open Burning All Categories Yard Waste - Brush Species Unspecified			-2.3	-16.9	-2.1	-2.1	
Arizona	2610000500- Open Burning All Categories Land Clearing Debris	241.8		561.1	8,187.4	821.7	821.7	
Arizona	2610030000- Open Burning Residential Household Waste	-15.6	-2.1	-85.2	-288.1	-34.7	-31.1	
Arizona	2810050000- Other Combustion- Motor Vehicle Fires Total	-0.1		-0.9	-3.5	-2.8	-2.8	
WRAP PRP18 Emissions Inventory (TPY):								
Arizona	All	12,798.9	3,408.2	170,957.7	77,964.3	136,760.4	39,624.6	9,457.1

California – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
California	All	117,716.6	9,772.2	357,745.6	384,966.7	190,987.1	84,801.2	
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
No Changes								
WRAP PRP18 Emissions Inventory (TPY):								
California	All	117,716.6	9,772.2	357,745.6	384,966.7	190,987.1	84,801.2	

Colorado – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
Colorado	All	44,040.5	7,498.7	173,092.4	94,594.8	185,238.3	48,422.5	96.8
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
Colorado	2310000220- Oil and Gas Production: Drill rigs	361.6	2.1	154.8	996.0			
Colorado	2310010100- Oil and Gas Production: Crude Petroleum Oil well heaters	0.7			0.2			
Colorado	2310010200- Oil and Gas Production: Crude Petroleum Oil well tanks - flashing & standing/working/breathing			63.5				
Colorado	2310010300- Oil and Gas Production: Crude Petroleum Oil well pneumatic devices			32.0				
Colorado	2310020600- Oil and Gas Production: Natural Gas Compressor engines	4,005.8		1,485.4	3,412.2			
Colorado	2310021100- Oil and Gas Production: Natural Gas well heaters	1,014.9			213.2			
Colorado	2310021300- Oil and Gas Production: Natural Gas well pneumatic devices			231.7				
Colorado	2310021400- Oil and Gas Production: Natural Gas well dehydrators			97.3				
Colorado	2310021500- Oil and Gas Production: Natural Gas well completion - flaring and venting	208.7		4,233.1	51.6			
Colorado	2310023000- Oil and Gas Production: Natural Gas CBM gas well - Dewatering pump engines	216.6						
Colorado	2310030210- Oil and Gas Production: Natural Gas Liquids Gas well tanks - Flashing & Standing/Working/Breathing			283.5				
WRAP PRP18 Emissions Inventory (TPY):								
Colorado	All	49,848.8	7,500.8	179,673.7	99,268.0	185,238.3	48,422.5	96.8

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Idaho – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
Idaho	All	42,067.9	2,720.5	194,210.1	40,971.5	62,880.6	7,702.7	2,288.4
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
Idaho	2104004000- Residential Distillate Oil Combustion Total		332.8					
WRAP PRP18 Emissions Inventory (TPY):								
Idaho	All	42,067.9	3,053.3	194,210.1	40,971.5	62,880.6	7,702.7	2,288.4

Montana – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
Montana	All	36,053.0	3,432.1	67,476.7	41,415.2	173,892.3	40,015.5	607.9
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
Montana	2310000220- Oil and Gas Production: Drill rigs	-801.7	-1.6	10.3	5.9			
Montana	2310010100- Oil and Gas Production: Crude Petroleum Oil well heaters	69.30			13.9			
Montana	2310010200- Oil and Gas Production: Crude Petroleum Oil well tanks - flashing & standing/working/breathing			6,073.7				
Montana	2310010300- Oil and Gas Production: Crude Petroleum Oil well pneumatic devices			129.5				
Montana	2310020600- Oil and Gas Production: Natural Gas Compressor engines	-15,083.0		420.7				
Montana	2310021100- Oil and Gas Production: Natural Gas well heaters	-684.3			-143.7			
Montana	2310021300- Oil and Gas Production: Natural Gas well pneumatic devices			-156.2				
Montana	2310021500- Oil and Gas Production: Natural Gas well completion - flaring and venting	131.9		86.5	33.0			
Montana	2310030220- Oil and Gas Production: Natural Gas Liquids Gas well tanks - Flashing & Standing/Working/Breathing			-0.6				
Deleted Records	All	-281.4	-0.0	-10.1	-7.5			
WRAP PRP18 Emissions Inventory (TPY):								
Montana	All	19,403.8	3,430.5	74,030.5	41,316.8	173,892.3	40,015.5	607.9

Nevada – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
Nevada	All	7,487.6	14,194.4	47,609.9	17,479.3	97,755.7	23,312.9	1,645.7
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
Nevada	2310000220- Oil and Gas Production: Drill rigs	4.3	0.1					
Nevada	2310010100- Oil and Gas Production: Crude Petroleum Oil well heaters	-0.1			-0.1			
Nevada	2310010200- Oil and Gas Production: Crude Petroleum Oil well tanks - flashing & standing/working/breathing			-9.9				
Nevada	2310010300- Oil and Gas Production: Crude Petroleum Oil well pneumatic devices			1.5				
Nevada	2310020600- Oil and Gas Production: Natural Gas Compressor engines	-8.3						
Nevada	2310021100- Oil and Gas Production: Natural Gas well heaters	-5.1			-1.1			
Nevada	2310021300- Oil and Gas Production: Natural Gas well pneumatic devices			-1.2				
Nevada	2310021400- Oil and Gas Production: Natural Gas well dehydrators			-0.2				
Nevada	2401002000- Surface Coating- Architectural Coatings - Solvent-based Total			1,949.1				
Nevada	2401003000- Surface Coating- Architectural Coatings - Water-based Total			1,720.5				
Nevada	2401015000- Surface Coating- Factory Finished Wood			530.0				
Nevada	2401020000- Surface Coating- Wood Furniture			582.7				
Nevada	2401040000- Surface Coating- Metal Cans			-0.5				
Nevada	2401050000- Surface Coating- Miscellaneous Finished Metals			195.5				
Nevada	2401055000- Surface Coating- Machinery and Equipment			71.9				
Nevada	2401060000- Surface Coating- Large Appliances			898.1				
Nevada	2401065000- Surface Coating- Electronic and Other Electrical			76.4				
Nevada	2401070000- Surface Coating- Motor Vehicles			11.4				
Nevada	2401080000- Surface Coating- Marine			48.5				
Nevada	2401085000- Surface Coating- Railroad			77.1				
Nevada	2401090000- Surface Coating- Miscellaneous Manufacturing Total			870.7				
Nevada	2401100000- Surface Coating- Industrial Maintenance Coatings Total			1,231.3				
Nevada	2401200000- Surface Coating- Other Special Purpose Coatings Total			1,116.3				
Nevada	2415005000- Degreasing- Furniture and Fixtures			251.2				
Nevada	2415025000- Degreasing- Industrial Machinery and Equipment			0.2				
Nevada	2415030000- Degreasing- Electronic and Other Elec.			26.9				
Nevada	2415035000- Degreasing- Transportation Equipment			26.1				
Nevada	2415040000- Degreasing- Instruments and Related Products			0.7				
Nevada	2415045000- Degreasing- Miscellaneous Manufacturing			0.4				
Nevada	2415230000- Degreasing- Electronic and Other Elec.			66.4				
Nevada	2415245000- Degreasing- Miscellaneous Manufacturing			268.4				
Nevada	2415345000- Degreasing- Miscellaneous Manufacturing			218.5				

Nevada – Area Sources Continued

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
Nevada	2415360000- Degreasing- Auto Repair Services			3,457.6				
Nevada	2460110000- Consumer and Commercial Personal Care Products: Hair Care Products Total			772.3				
Nevada	2460130000- Consumer and Commercial Personal Care Products: Fragrance Products Total			311.7				
Nevada	2460150000- Consumer and Commercial Personal Care Products: Nail Care Products Total			24.5				
Nevada	2460190000- Consumer and Commercial Personal Care Products: Miscellaneous Personal Care Products Total			96.5				
Nevada	2460230000- Consumer and Commercial Household Products: Fabric and Carpet Care Products Total			34.4				
Nevada	2460250000- Consumer and Commercial Household Products: Waxes and Polishes Total			127.4				
Nevada	2460270000- Consumer and Commercial Household Products: Shoe and Leather Care Products Total			19.6				
Nevada	2460290000- Consumer and Commercial Household Products: Miscellaneous Household Products Total			92.4				
Nevada	2460410000- Consumer and Commercial Automotive Aftermarket Products: Detailing Products Total			151.6				
Nevada	2460420000- Consumer and Commercial Automotive Aftermarket Products: Maintenance and Repair Products Total			506.9				
Nevada	2460510000- Consumer and Commercial Coatings and Related Products: Aerosol Spray Paints Total			504.2				
Nevada	2460520000- Consumer and Commercial Coatings and Related Products: Coating Related Products Total			31.5				
Nevada	2460610000- Consumer and Commercial Adhesives and Sealants: Adhesives Total			4.3				
Nevada	2460810000- Consumer and Commercial FIFRA Related Products: Insecticides Total			524.2				
Nevada	2460820000- Consumer and Commercial FIFRA Related Products: Fungicides and Nematicides Total			2.0				
Nevada	2460900000- Consumer and Commercial Miscellaneous Products (Not Otherwise Covered) Total			1,268.5				
Deleted Records	All			-12,587.5				
WRAP PRP18 Emissions Inventory (TPY):								
Nevada	All	7,478.4	14,194.5	53,180.0	17,478.1	97,755.7	23,312.9	1,645.7

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New Mexico – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
New Mexico	All	172,318.9	15,753.2	399,205.0	47,997.0	144,289.2	34,664.4	909.6
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
New Mexico	2310000220- Oil and Gas Production: Drill rigs	-2,483.7	-13.9	67.7	434.2			
New Mexico	2310000330- Oil and Gas Production: Artificial lift	763.3	0.1	7.9	160.9			
New Mexico	2310000440- Oil and Gas Production: Saltwater disposal engines	170.4		9.5	24.5			
New Mexico	2310010100- Oil and Gas Production: Crude Petroleum Oil well heaters	416.0	0.3		103.9			
New Mexico	2310010200- Oil and Gas Production: Crude Petroleum Oil well tanks - flashing & standing/working/breathing			1,194.3				
New Mexico	2310010300- Oil and Gas Production: Crude Petroleum Oil well pneumatic devices			122.1				
New Mexico	2310010700- Oil and Gas Production: Crude Petroleum Oil well fugitives			622.1				
New Mexico	2310010800- Oil and Gas Production: Crude Petroleum Oil well truck loading			154.5				
New Mexico	2310020600- Oil and Gas Production: Natural Gas Compressor engines	-54,605.9	1.4	4,879.0	38,614.0			
New Mexico	2310020700- Oil and Gas Production: Natural Gas well fugitives			52,087.1				
New Mexico	2310020800- Oil and Gas Production: Natural Gas well truck loading			501.3				
New Mexico	2310021100- Oil and Gas Production: Natural Gas well heaters	-6,296.4	7.3		-921.0			
New Mexico	2310021300- Oil and Gas Production: Natural Gas well pneumatic devices			-3,693.7				
New Mexico	2310021400- Oil and Gas Production: Natural Gas well dehydrators			-7,020.7				
New Mexico	2310021500- Oil and Gas Production: Natural Gas well completion - flaring and venting	-1,809.8	0.1	-70,522.1	-455.2			
New Mexico	2310021600- Oil and Gas Production: Natural Gas well venting			63,212.9				
New Mexico	2310023000- Oil and Gas Production: Natural Gas CBM gas well - Dewatering pump engines	66.9						
New Mexico	2310030210- Oil and Gas Production: Natural Gas Liquids Gas well tanks - Flashing & Standing/Working/Breathing, Uncontrolled			-31,670.1				
New Mexico	2311000100- Construction: All Processes Wind Erosion					-586.9	-312.5	
New Mexico	2311010000- Construction: Residential Total					-90.3	-26.4	
New Mexico	2311020000- Construction: Industrial/Commercial/Institutional Total					-307.1	-89.8	
New Mexico	2311030000- Construction: Road Construction Total					-1,704.8	-498.4	
Deleted Records	All	-124.2	-0.1	-70,753.3	-5.3			
WRAP PRP18 Emissions Inventory (TPY):								
New Mexico	All	108,415.5	15,748.4	338,403.5	85,953.0	141,600.2	33,737.5	909.6

North Dakota – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
North Dakota	All	21,128.7	5,856.3	82,650.7	21,606.8	311,272.5	64,978.4	463.0
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
North Dakota	2310000220- Oil and Gas Production: Drill rigs	362.1	1.3					
North Dakota	2310010100- Oil and Gas Production: Crude Petroleum Oil well heaters	32.1			6.4			
North Dakota	2310010200- Oil and Gas Production: Crude Petroleum Oil well tanks - flashing & standing/working/breathing			2,814.4				
North Dakota	2310010300- Oil and Gas Production: Crude Petroleum Oil well pneumatic devices			40.3				
North Dakota	2310020600- Oil and Gas Production: Natural Gas Compressor engines	11,648.5						
North Dakota	2310021100- Oil and Gas Production: Natural Gas well heaters	115.7			24.3			
North Dakota	2310021300- Oil and Gas Production: Natural Gas well pneumatic devices			26.4				
North Dakota	2310021400- Oil and Gas Production: Natural Gas well dehydrators			362.0				
North Dakota	2310021500- Oil and Gas Production: Natural Gas well completion - flaring and venting	33.7		1,657.2	8.5			
North Dakota	2310030220- Oil and Gas Production: Natural Gas Liquids Gas well tanks - Flashing & Standing/Working/Breathing			15.7				
Deleted Records	All	-0.6						
WRAP PRP18 Emissions Inventory (TPY):								
North Dakota	All	33,320.2	5,857.6	87,566.7	21,646.0	311,272.5	64,978.4	463.0

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Oregon – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
Oregon	All	17,027.2	8,421.9	334,872.1	380,523.7	225,924.7	81,744.6	249.8
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
Oregon	2310020600- Oil and Gas Production: Natural Gas Compressor engines	-4.8						
Oregon	2310021100- Oil and Gas Production: Natural Gas well heaters	0.8			0.1			
Oregon	2310021300- Oil and Gas Production: Natural Gas well pneumatic devices			0.2				
Oregon	2310021400- Oil and Gas Production: Natural Gas well dehydrators			-5.5				
WRAP PRP18 Emissions Inventory (TPY):								
Oregon	All	17,023.2	8,421.9	334,866.8	380,523.8	225,924.7	81,744.6	249.8

South Dakota – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
South Dakota	All	7,206.9	11,667.2	50,072.1	25,112.4	226,750.1	48,648.4	502.0
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
South Dakota	2103002000- Commercial/Institutional Bituminous/Subbituminous Coal Combustion	20.6	36.1	0.2	11.7	17.1	15.1	
South Dakota	2199003000- Total Area Source Lignite Coal Combustion	10.0	34.7	1.8	3.5	16.5	0.4	
South Dakota	2310000220- Oil and Gas Production: Drill rigs	92.9	0.2	0.2	1.2			
South Dakota	2310010100- Oil and Gas Production: Crude Petroleum Oil well heaters	2.0			0.3			
South Dakota	2310010200- Oil and Gas Production: Crude Petroleum Oil well tanks - flashing & standing/working/breathing			171.1				
South Dakota	2310010300- Oil and Gas Production: Crude Petroleum Oil well pneumatic devices			6.0				
South Dakota	2310020600- Oil and Gas Production: Natural Gas Compressor engines	-46.1						
South Dakota	2310021100- Oil and Gas Production: Natural Gas well heaters	1.3			0.2			
South Dakota	2310021300- Oil and Gas Production: Natural Gas well pneumatic devices			0.3				
South Dakota	2310021400- Oil and Gas Production: Natural Gas well dehydrators			-3.1				
Deleted Records		-2,284.0	-7,653.6	-10.5	-1,042.5	-2,707.5	-506.7	-6.2
WRAP PRP18 Emissions Inventory (TPY):								
South Dakota	All	5,003.6	4,084.6	50,238.1	24,086.8	224,076.1	48,157.2	495.8

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Utah – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
Utah	All	21,635.7	3,586.9	173,344.0	45,962.2	34,279.3	5,760.8	1,679.8
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
Utah	2310000220- Oil and Gas Production: Drill rigs	-1,267.3	-4.1	31.4	213.2			
Utah	2310010100- Oil and Gas Production: Crude Petroleum Oil well heaters	77.1			15.5			
Utah	2310010200- Oil and Gas Production: Crude Petroleum Oil well tanks - flashing & standing/working/breathing			6,760.1				
Utah	2310010300- Oil and Gas Production: Crude Petroleum Oil well pneumatic devices			-154.0				
Utah	2310020600- Oil and Gas Production: Natural Gas Compressor engines	-3,395.2		91.1				
Utah	2310021100- Oil and Gas Production: Natural Gas well heaters	-1,082.5			-227.4			
Utah	2310021300- Oil and Gas Production: Natural Gas well pneumatic devices			-247.1				
Utah	2310021400- Oil and Gas Production: Natural Gas well dehydrators			-2,301.9				
Utah	2310021500- Oil and Gas Production: Natural Gas well completion - flaring and venting	-31.4		-1,541.2	-7.9			
Utah	2310030210- Oil and Gas Production: Natural Gas Liquids Gas well tanks - Flashing & Standing/Working/Breathing			-16,021.4				
Deleted Records	All	-1.4		-12.3	-0.0			
WRAP PRP18 Emissions Inventory (TPY):								
Utah	All	15,935.0	3,582.8	159,948.7	45,955.6	34,279.3	5,760.8	1,679.8

Washington – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
Washington	All	22,746.0	8,667.3	253,709.8	252,446.6	348,329.4	113,984.7	7,021.7
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
No changes								
WRAP PRP18 Emissions Inventory (TPY):								
Washington	All	22,746.0	8,667.3	253,709.8	252,446.6	348,329.4	113,984.7	7,021.7

Wyoming – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
Wyoming	All	79,196.4	23,109.2	436,884.9	34,463.3	45,027.2	12,435.8	514.1
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
Wyoming	231000220- Oil and Gas Production: Drill rigs	2,446.5	-12.2	406.8	3,688.4			
Wyoming	2310010100- Oil and Gas Production: Crude Petroleum Oil well heaters	17.4			3.4			
Wyoming	2310010200- Oil and Gas Production: Crude Petroleum Oil well tanks - flashing & standing/working/breathing			1,523.4				
Wyoming	2310010300- Oil and Gas Production: Crude Petroleum Oil well pneumatic devices			-658.5				
Wyoming	2310020600- Oil and Gas Production: Natural Gas Compressor engines	-32,073.3		464.2				
Wyoming	2310021100- Oil and Gas Production: Natural Gas well heaters	4,150.7			871.6			
Wyoming	2310021300- Oil and Gas Production: Natural Gas well pneumatic devices			947.6				
Wyoming	2310021400- Oil and Gas Production: Natural Gas well dehydrators			-75,093.8				
Wyoming	2310021500- Oil and Gas Production: Natural Gas well completion - flaring and venting	-38.5		-1,891.3	-9.7			
Wyoming	2310023000- Oil and Gas Production: Natural Gas CBM gas well - Dewatering pump engines	106.3						
Wyoming	2310030210- Oil and Gas Production: Natural Gas Liquids Gas well tanks - Flashing & Standing/Working/Breathing			-24,857.2				
Wyoming	2310030220- Oil and Gas Production: Natural Gas Liquids Gas well tanks - Flashing & Standing/Working/Breathing			-726.8				
WRAP PRP18 Emissions Inventory (TPY):								
Wyoming	All	53,805.5	23,097.0	336,999.3	39,017.0	45,027.2	12,435.8	514.1

Tribal – Area Sources

State	SCC	NO _x	SO ₂	VOC	CO	PM ₁₀	PM _{2.5}	NH ₃
WRAP 2018b Base Case Emissions Inventory (TPY):								
Tribal	All	6,639.0	2.1	18,240.3	564.0	2,062.5	412.2	0.1
Net Changes to 2018b Base Case Emissions Inventory (TPY):								
No Changes								
WRAP PRP18 Emissions Inventory (TPY):								
Tribal	All	6,639.0	2.1	18,240.3	564.0	2,062.5	412.2	0.1

ATTACHMENT 3:
OUTSTANDING ISSUES

Outstanding Issues Related to PRP18 Emissions Inventory

State	Commenter	Comment Summary	Response for PRP 2018 Analysis	Data Source	Re-projection Required?	2002 Changes?	ERG Status
AK	A.Edwards	Responded to questions about 2 missing coal-fired boilers in 2002 and 2018 at USArmy Ft. Wainwright	Need to add 2 records for PM10 (at min.) for these missing boilers in both 2002 and 2018	E-mail from Alice, 4/20/07	Yes - but not at this time	Yes - but not at this time	Defer 2002 and 2018 changes
AZ	L. Toopal	Per Pechan Report, add new plant, Arizona Clean Fuels Refinery, to be built 40 mi. east of Yuma. Permitted emissions. - 251 tpy of SO2	We will add this new facility to 2018. Growth in the AZ refining sector will be adjusted for this new facility.	AZ_Proposed Changes & Feedback Request.xls	Yes	No	Added 5 records for the new facility (pollutant totals) to 2018 database. ADEQ should provide process-level data using SCC nos. and unit/process IDs for file formatting purposes.
AZ	S. DiBiase	Desert Basin (facility ID V20620/EGU0049) CO emissions appear to be off...should be 105 tons not 1,051 for SCC 20100201.	4-16: E-mail to Scott asking if we should change 2002 and 2018 to 105 tons.	E-mail 3-15-07	TBD	TBD	TBD
AZ	P. DeNee	Point Sources It was difficult to track the various point sources used in the NOx pivot tables and the 2018-18b spreadsheet because the source names are not in alphabetical order. They are fortunately in order in the PM10 and PM2.5 Pivot Tables.	Agreed - we will fix the pivot tables to order plants alphabetically.	WRAP 2018 EI Review - Phil DeNee.doc	No	No	No action required for emissions, but change will be made in pivot tables
CO	Curtis Taipale	Colorado was the first state in the country to have voters approve a Renewable Energy Standard (RES) that requires utilities with over 40,000 customers to generate or purchase a minimum amount of electricity from renewable sources. By 2018, the benefit of this program might reduce our coal-fired generating needs by at more 7-10%. Similarly, I understand that California has a similar program with benefits approaching 13% by 2007. It seems that we should take credit in the 2018 modeling for these types of programs. It would take some technical analysis to nail down the exact estimates that I am unable to quickly quantify by today's deadline. We will provide some technical analysis in our SIP to address this issue but having it quantified in the regional modeling would be the best option. Thoughts?	Response from Lee Gribovicz: "...add the renewable credit to the list..." of outstanding issues.	E-mail from Curt and response from Lee on 5/10/07	No	No	Defer issue

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Outstanding Issues Related to PRP18 Emissions Inventory (Continued)

State	Commenter	Comment Summary	Response for PRP 2018 Analysis	Data Source	Re-projection Required?	2002 Changes?	ERG Status
ID	C. Ramsdell	Sent 2005 SO2 emissions for four (4) facilities with 4 different SCCs (120 to 215 tons) not shown in 80% summary table; suggest to add to inventory (Facilities: BAF Blackfoot/ID 1100012; Idaho Supreme Potatoes/ID 1100013; Larsen Farms/ID 3300002; Idaho Fresh Pak/ID 5100017)	BAF Blackfoot/SCC 10200402 and Larsen Farms/SCC 10300401 are not in 2018-18b or 2002 inventories; we will not add them at this time (have requested 2002 emissions from IDEQ so that these can be added to 2002 first, then projected to 2018). Idaho Supreme Potatoes/SCC 10200401 has 11.27 ton SO2 in 2018-18b, and Idaho Fresh Pak/SCC 10200501 has 0.01 ton SO2 in 2018; we will set their 2018 emissions to 2005 levels as provided by IDEQ. We defer adding the BAF Blackfoot and Larsen Farms emissions until the 2002 and 2018 inventories are updated next year. (We provided this explanation to Chris on 4-16-07.)	point_summary_ID_cut.xls	No	Yes - but deferred	Changed SO2 emissions for 2 facilities (2 records). Deferred changes to BAF Blackfoot and Larsen Farms
ID	C.Ramsdell	Provided spreadsheet with dual-fueled source emissions	The data provided do not include SCCs, and are for 2005, so they cannot be directly compared to the existing 2018-18b database. We will assume that these are accounted for in the 2002 and 2018 inventory, otherwise IDEQ would need to provide these by Facility ID, and SCC. We requested this information from Chris on 4-16-07.) V-mail from Chris indicates that data cannot be provided until later this week, which will be too late for this project. This comment will be deferred until next inventory update.	Dual Emissions.xls	TBD	No	Deferred
ID	C.Ramsdell	Provided spreadsheet with the top 10 area source SCCs for NOx and SO2 by county	NOx: all top 10 SCCs have 2005 emissions that are <2018, except for 2102006000 (Industrial natural gas boilers) where ID 2005 = 1619 tons (for 44 counties) and 2018-18b = 1325 tons (for 6 counties only). Will make no changes to the 2018 inventory at this time as reconciliation will be required for the 2002 inventory and reproject to 2018.	Top 10 SCC SO2 NOX by County.xls	Yes - but deferred	Yes - but deferred	Deferred

Outstanding Issues Related to PRP18 Emissions Inventory (Continued)

State	Commenter	Comment Summary	Response for PRP 2018 Analysis	Data Source	Re-projection Required?	2002 Changes?	ERG Status
ID	C.Ramsdell	Provided spreadsheet with the top 10 area source SCCs for NOx and SO2 by county	NOx: For SCC 2010008000 (Industrial wood boilers), the 2018-18b NOx emissions seem excessive as compared to 2005, where ID 2005 = 1840 tons and 2018-18b = 31803 tons. The large 2018-18b estimate is driven by an equally large 2002 estimate, which appears to be incorrect (i.e., based on EPA gapfilling of NEI, which was used for WRAP 2002). We have requested 2002 emissions from Chris for this SCC on 4-16-07; v-mail from Chris said that data cannot be provided until later this week, which will be too late for this project. This change to 2002 and 2018 for NOx and SO2 will be deferred until the next inventory update.	Top 10 SCC SO2 NOX by County.xls	Yes - but deferred	Yes - but deferred	Deferred
ID	C.Ramsdell	ENVIRON has raised an issue that stage I and II refueling SCCs (250xxxxxx) are missing from the area source inventory. Chris Ramsdell with the state has confirmed that they did include these sccs in their 2002 area source inventory.	These sources did not appear in WRAP 2002 inventory (taken from 2002 NEI). Adding to 2018 now would require re-projection from 2005, and would create an inconsistency with 2002. Will be included in revision to 2002 and next revision to 2018.	Email	No - not at this time.	Yes - but not at this time.	Deferred
ID	M. Edwards	Meeting scheduled with TASCO/Amalgamated Sugar on March 27, after which BART level will be known.	4-6-07: sent e-mail to Mike Edwards requesting BART limit for TASCO.	E-mail_MikeEdwards_3-23-07_RE Idaho EI information from 31907 conference call.doc	No	No	Deferred
NV	L. Campbell	Add 2002 CO emissions for 2 new facilities (NP Clark and Sunrise Stations) and 1 existing facility (SPPC Valmy) and project to 2018 (Facility IDs, AP49110398, AP49110399, and AP49110457.)	SPPC Valmy is in 2018, but CO amount was below 80% cut-off; no change is needed. Will need to add CO boiler emissions (SCC 10300601) for NP Clark and Sunrise Stations later.	NV_2018-18b_point_summary_80% review by NDEP.xls (CO worksheet)	Yes - but not at this time	Yes - but not at this time.	No action required
NV	M. Doyle - Clark Co.	Request to add PM2.5 emissions (assume PM2.5=PM10) for all natural gas fired power plants (excluding Copper Mtn, and Chuck Lenzie which already have PM2.5 estimates).	Would need to add PM2.5 emissions for 2002 and project to 2018. This may be done during next RP inventory revision, but not at this time.,	Email 4-3-07	Yes - but not at this time	Yes - but not at this time	No action required

Outstanding Issues Related to PRP18 Emissions Inventory (Continued)

State	Commenter	Comment Summary	Response for PRP 2018 Analysis	Data Source	Re-projection Required?	2002 Changes?	ERG Status
NV	Rodney Langston – Clark Co.	WRAP projections should include PM10 controls on fugitive dust sources from our PM10 SIP	ERG researched this issue, with assistance from Clark Co. staff (Doyle and Lendis). Appendix L of the SIP provides control reductions for unstable vacant land, construction, unpaved road dust, paved road dust, unpaved parking, and race tracks. The only relevant category to the PRP18 point and area source inventory is a subset of construction:construction activities. The Appendix L documentation provides an emission reduction of 87% (due to watering), a rule penetration of 98% (only sites 1/4 acre or larger), and varying rule effectiveness values - 40% in 2001, 64% in 2002, and 80% in 2003 and beyond. This results in an overall control reduction of 34% in 2001 and 68% in 2006. The Appendix L documentation provides 2001 annual uncontrolled emissions (23,109 tpy) and controlled emissions (15,252 tpy) for the Valley-Wide Inventory; the only 2006 inventories in the documentation are 24-hour inventories. For the WRAP inventories, there are three construction source categories: residential, industrial/commercial/institutional, and road. The 2002 emissions for Clark County are 30,802 tpy; the 2018 emissions are 44,407 tpy.				These reductions can be incorporated into the next version of the 2018 inventory for Clark County.
SD	D. Healey	Provided 2005 PM2.5, SO2, and NOx emissions for area source distillate fuel combustion. In follow-up call with ERG, it was noted that only 2005 fuel use is readily available (not 2002)	We will not make these changes, since this will require a re-projection from 2005 to 2018. This change will be deferred until next year with 2002 and 2018 EIs are revised/finalized again.	SD AREA NEI distillate.xls	Yes - but not at this time	Yes - but not at this time	No Action Required

Outstanding Issues Related to PRP18 Emissions Inventory (Continued)

State	Commenter	Comment Summary	Response for PRP 2018 Analysis	Data Source	Re-projection Required?	2002 Changes?	ERG Status
UT	D. McMurtrie	Confirmed changes to SO2 sources recommended in Pechan report for: Holcim - Devil's Slide, Kennecott Smelter & Refinery, Flying J Refinery, Tesoro - SLC Refinery, Chevron - Salt Lake Refinery, and Phillips Refinery. All facilities' emissions change for 2018, and all except Holcim and Kennecott change in 2002.	4/10: P.Fields (ERG) talked to D.McMurtrie who said she would send an e-mail to confirm changes are okay. Confirmation e-mail was never received.	UT_Proposed Changes & Feedback Request.xls	No	Yes - for Flying J, Tesoro-SLC, Chevron-SL, and Phillips Refineries - but not at this time.	TBD
WA	S. Otterson	Provided updated 2005 woodstove/fireplace inventory to replace the 2002 inventory	We compared the 2002 WRAP emissions to the 2005 WA emissions, and found (2002/2005 ratio): NOx 89%, SO2 84%, VOC 121%, CO 97%, PM10 96%, PM2.5 90%. We will defer these changes until WRAP does a final 2002 and 2018 inventory revision.	WA_Updates.xls	No - not at this tme	Yes - but not at this time	No action required
WA	S. Otterson	"LAKESIDE INDUSTRIES, INC. / CENTRALIA" (FIPS 53041, plant ID 15) has been split into two (2) different plants: asphalt (756) and rock crushing (1953)	4-11-07: E-mail to Sally asking for new records to replace old records; confirm only a 2018 change (and not 2002). May require re-projection if new SICs (different growth factors may now apply)	WA_Updates.xls	TBD	TBD	TBD
WA	S. Otterson	Provided actual 2005 emissions data for 3 facilities listed with Plant IDs PRJ*** in NIF format (Goldendale Energy Center, Frederickson Power LP, Chehalis Power LP/Chehalis Generation Facility)	We will replace the "PRJ" plant IDs with the state IDs, but cannot project from 2005 at this time.	WA_Updates.xls and Adds_Replace_NIF.mdb	2005 projection is deferred	Yes - plant IDs only	Changed Plant Ids for 2018 (PRJFACxxx)
WA	S. Otterson	Provided actual 2005 oil refinery data (in NIF format) to replace their current 2002 WRAP data (Puget Sound Refining Co., Tesoro Northwest Co., Conoco Phillips, BP Cherry Point Refinery)	We will keep in data on file, but cannot make changes at this time.	WA_Updates.xls and Adds_Replace_NIF.mdb	Yes, but not at this time	Yes, but not at this time	No action required
WA	S. Otterson	Provided actual 2005 emissions data (in NIF format) to replace current 2002 WRAP data for several other facilities (Mutual Materials, Longview Fibre, Weyerhaeuser co.)	We will keep in data on file, but cannot make changes at this time.	WA_Updates.xls and Adds_Replace_NIF.mdb	Yes, but not at this time	Yes, but not at this time	No action required

Outstanding Issues Related to PRP18 Emissions Inventory (Continued)

State	Commenter	Comment Summary	Response for PRP 2018 Analysis	Data Source	Re-projection Required?	2002 Changes?	ERG Status
WY	L. Bocchino	Dyno Nobel received a permit last year which included the addition of a nitric acid plant, an ammonium nitrate plant, the replacement of two engines, and the *restoration* of 2 existing boilers. The net change in potential emissions is between 30 and 200 tpy depending on the pollutant. The permit is attached. What more do you need?	The records in the existing 2018-18b database, by SCC and unit ID, do not match any of the unit IDs shown on the permit. Sent e-mail on 4-11 to Brian and Lori requesting them to match the existing records/units/SCCs with permit limits; we may decide to pull all current 2002 and 2018 Dyno Nobel records and replace them with new records to match the existing permit limits (based on the units in the permit); this could not be done until the next revision of the EI since there are 2002 implications.	E-mail_Lori_More questions and info re WY 2018 projections.doc and DynoNobelMD-1502.doc	TBD	TBD	TBD
WY	B. Bohlmann	Dyno Nobel MTBE plant (operable in 2002) has been dismantled and air permits are being proposed for additional acid plants. Thus 2018 emissions may be significantly different from the 2002 emissions.	We need specific SCC level emission changes for 2018 in order to put the impact of these changes in the to inventory. In the absence of additional information from the agency, no changes will be made	E-mail 4-11-07	No	No	TBD
WY	B. Bohlmann	For Plant ID 5602100002 (DYNO NOBEL INC. - CHEYENNE PLANT), change SCC from 30688801 to 30104199	We will either change SCC as requested or pull all records and replace with new records in order to match to Unit IDs, permit limits (see previous comment and response).	Wrap WY_2018-18b_point_summary_80%.xls (NOx, SO2, VOC, CO, PM10 worksheet)	TBD	TBD	TBD
WY	B. Bohlmann	Combustion SCC growth factors (soda ash production) for 2018 SO2 emissions for FMC Corp-Green River Plant-Sodium products (Plant ID 5603700048) per Pechan SO2 Report for 309 States (Oct 2006), Table III-5.	Will change SO2 emissions for the applicable EU (EU ID#1014 and 1015) to 3555 tons from 3612 tons. Will obtain SCC level info from Pechan.	WRAP WY_Proposed Changes & Feedback Request.xls	No	No	Revised SO2 emissions
WY	B. Bohlmann	Per Pechan Report, Table III-5, made FCCU emission adjustments for 2002 and 2018 (i.e., growth factor adjustment for fuel combustion sources for 2018 SO2 emissions for Frontier Refining Inc. (Plant ID 5602100001)).	For 2018, we will change the 2018 total SO2 emissions for the facility to 1292 tons from 1964 tons. Per WRAP, no changes to 2002 should be made at this time.	WRAP WY_Proposed Changes & Feedback Request.xls	No	Yes - but not at this time	Revised 2018 SO2 emissions
WY	B. Bohlmann	Per Pechan Report, Table III-5, possible FCCU adjustments (2002 and 2018); growth factor adjustment for fuel combustion sources for 2018 SO2 emissions for Sinclair Oil Corp-Sinclair Refinery (Plant ID 5600700001).	Will change the 2018 total SO2 emissions for the facility to 3709 tons from 4703 tons. Will not change 2002 emissions at this time.	WRAP WY_Proposed Changes & Feedback Request.xls	No	Yes - but not at this time	Revised 2018 SO2 emissions

Outstanding Issues Related to PRP18 Emissions Inventory (Continued)

State	Commenter	Comment Summary	Response for PRP 2018 Analysis	Data Source	Re-projection Required?	2002 Changes?	ERG Status
WY	B. Bohlmann	Per Pechan Report, Table III-5, made FCCU adjustments (2002 and 2018); growth factor adjustment for fuel combustion sources for 2018 SO2 emissions for Sinclair Oil Corp-Casper Refinery (Plant ID 5602500005)	Will change the 2018 total SO2 emissions for the facility to 1165 tons from 1389 tons. Will obtain SCC level info from Pechan. Will not change 2002 emissions at this time per WRAP.	WRAP WY_Proposed Changes & Feedback Request.xls	No	Yes - but not at this time	Revised 2018 SO2 emissions
WY	B. Bohlmann	The Santa Fe Snyder Riverton Plant, now called Devon Energy Production Company, L.P. Riverton Dome, is on the Wind River Indian Reservation and needs to be listed as such. It is currently listed as a Wyoming facility instead of a tribal facility.	Facility name will be changed; facility will be moved from Wyoming to the Wind River Indian Reservation.	E-mail from Brian Bohlmann on 5/3/07.	No	Yes	Changed facility name and assigned to Wind River Indian Reservation.
WY	B. Bohlmann	Celotex Corporation has a FIPS code of 56029:0:3 indicating that this is a Wyoming facility. Based on a file search, this facility is not in Wyoming.	Facility was identified as BPB America, Cody Wallboard Plant.	E-mail from Brian Bohlmann on 5/15/07.	No	Yes	Information arrived too late for revision. Will be added to the outstanding issues list.