

PM₁₀ SIP/Maintenance Plan Evaluation Report:

University of Utah

Salt Lake County Nonattainment Area

Minor Sources Removed from Original SIP

Utah Division of Air Quality

Major New Source Review Section

October 1, 2015

5.c.v Minor Sources Being Removed from the Original 1991 PM10 (Original) SIP

v1.0 This analysis has been conducted to demonstrate that removal of sources listed in the original SIP will not result in backsliding of emissions and will not interfere with the maintenance of attainment of PM10. All of the sources listed in this report have been removed from the original SIP because they are minor sources or are no longer in operation. The data provided in this report confirms that removing these sources as listed sources does not result in backsliding. The labeling of these sources reflects their identification in the original SIP (paragraph number and name) and current name, if a name change has occurred.

v2.0 Utah County Sources

1.2.A Bonneville Pacific Corporation (Lehi Cogeneration)

Bonneville Pacific Corporation owned but closed the cogeneration plant in Utah County in 1993. Bonneville Pacific Corporation has revoked their permit and banked the emissions as emissions reduction credits (ERC) for PM10, and actively traded emissions in Utah County. The following are the listed emissions in the Original SIP for the cogeneration plant; 1.9 tons per year of PM10, 6.4 tons per year of SO2 and 297.0 tons per year of NOx. Modeling conducted for the revised SIP included all Utah County registered ERC. The modeling demonstrates no backsliding when including these emissions in the evaluation.

After further review, Bonneville Pacific Corporation should not be listed in the revised SIP since the facility is closed and the permit has been revoked under DAQE-GN2733001-02.

1.2.D General Refractories (A.P. Green Refractories Inc./Utah Refractories Corp.)

General Refractories, once known as A.P. Green Refractories, is now known as Utah Refractories Corporation. They own and operate the Lehi Plant at 2200 North 1100 West, Lehi in Utah County.

The following are the listed emissions in the original SIP for Lehi Plant; 20.4 tons per year of PM10, 18.3 tons per year of SO2 and 95.8 tons per year of NOx. Since 1991, Utah Refractories Corporation has added equipment and operates under AO DAQE-697-96; 22.43 ton per year of PM10, 18.25 tons per year of SO2 and 95.8 tons per year of NOx. The actual emissions that were submitted in the 2011 emissions inventory are as follows; 2.08 tons per year of PM10, 4.12 tons per year of SO2 and 56.55 tons per year of NOx.

After further review, Utah Refractories should not be listed in the current revised PM10 SIP due to the potential to emit emissions listed in DAQE- 697-96, which are below the threshold values for a major source as defined in 40 CFR 70.2.

1.2.F Geneva Steel

Geneva Steel owned and operated the Steel Manufacture ring Facility at 10 South Geneva Road, Vineyard City in Utah County. Geneva has revoked their permit and banked the emissions as PM10 ERCs (see DAQE-281-02). The following are the listed emissions in

the original SIP for the Steel Manufacture ring Facility; 1,299.4 tons per year of PM10, 1,078.9 tons per year of SO2 and 4,484.0 tons per year of NOx. The Utah county PM10 (and precursor) registered ERCs were included in the modeling for the revised SIP. The modeling demonstrates no backsliding when including these emissions are included in the evaluation.

After further review, Geneva Steel should not be listed in the revised SIP since the facility is closed and the permit has been revoked under DAQE-281-02.

1.2.G Heckett (Harsco Metals America)

Heckett now known as Harsco Metals America owns and operates the Plant #12 at 1500 North Geneva Road, Vineyard City in Utah County.

The following are the listed emissions in the original SIP for Plant #12 site; 99.5 tons per year of PM10, 4.2 tons per year of SO2 and 43 tons per year of NOx. Since 1991 Harsco Metals America has upgrade operations and has the following emissions permitted under DAQE-AN0107920004-11; 84.18 ton per year of PM10, 0.28 tons per year of SO2 and 23.77 tons per year of NOx. The actual emissions that were submitted in the 2011 emissions inventory are as follows; 13.2 tons per year of PM10, 0.002 tons per year of SO2 and 19 tons per year of NOx.

After further review, Harsco Metals American (Heckett) should not be listed in the revised SIP due to the potential to emit emissions listed in DAQE- AN0107920004-11 which are below the threshold values for a major source as defined in 40 CFR 70.2.

1.2.K Reilly Industries

Reilly Industries owned and operated the Ironton Coal Tar Refinery at 2555 South Industrial Parkway, Provo City in Utah County. Reilly Industries has closed the site and all equipment has been removed from the site. The following are the listed emissions in the original SIP for the Ironton Coal Tar Refinery; 0.5 tons per year of PM10, 4.3 tons per year of SO2 and 13.5 tons per year of NOx. None of the emissions were preserved as ERCs.

After further review, Reilly Industries should not be listed in the revised SIP since the coal tar refinery is closed and the site has been demolished.

1.2.M UP&L Hale

Utah Power & Light (UP&L) owned but closed the Hale Plant in Utah County in 1994. PacifiCorp has revoked their permit and banked the emissions as emissions reduction credits (ERC) for PM10, and actively traded emissions in Utah County. The following are the listed emissions in the original SIP for the cogeneration plant; 11.9 tons per year of PM10, 1.4 tons per year of SO2 and 787.3 tons per year of NOx.

After further review, UP&L Hale Plant should not be listed in the revised SIP since the facility is closed and the permit has been revoked under DAQE-807-94.

V3.0 Salt Lake County Sources

2.2.F Centrex (Lone Star)

Centrex or the company known as Lone Star has not submitted an emissions inventory in the last 10 years and no permit is on file for the source or company in either Salt Lake, Utah or Davis counties. There is no known pot ash facility in either Salt Lake, Utah or Davis counties as of 2015. Since the inventories have not been submitted from the company or site for the last 10 years, this source is not in operation or is de minimus. The following are the listed emissions in the original SIP for the pot ash plant; 111.0 tons per year of PM10, 200.0 tons per year of SO₂ and 762.0 tons per year of NO_x. After further review it is determined that Centrex/Lone Star be removed from the revised SIP.

2.2.L Crysen (Silver Eagle)

Crysen now known as Silver Eagle Refining owns and operates the Woods Cross Incorporated Petroleum Products Refinery at 2355 South 1100 West, Woods Cross City in Davis County. The refinery is located in Davis County, but included in the SIP because it impacts Salt Lake County as an area source. As an area source, the Silver Eagle Refinery will not be a listed point source the PM10 maintenance plan.

The following are the listed emissions in the original SIP; 2.7 tons per year of PM10, 206 tons per year of SO₂ and 156 tons per year of NO_x. Since 1991 Silver Eagle has undergone many equipment upgrades and operational changes which have resulted in the following PTE emissions under DAQE-AN101240028-15; 14 ton per year of PM10, 2.03 tons per year of SO₂ and 72.44 tons per year of NO_x. The allowable emissions that were submitted in the 2011 emissions inventory are as follows; 7.45 tons per year of PM10, 1.45 tons per year of SO₂ and 24.52 tons per year of NO_x.

After further review of Silver Eagle's Woods Cross Refinery it will not be listed in the revised SIP due to the potential to emit emissions listed in DAQE-AN101240028-15 which are below the threshold values for a major source as defined in 40 CFR 70.2.

2.2.M Engelhard Corp. (Harshaw Filtrol)

Engelhard Corporation or the company known as Harshaw Filtrol has not submitted an emissions inventory in the last 10 years. No permit is on file for source or company in either Salt Lake, Utah or Davis counties as of 2015. Since the actual emission inventories have not been submitted and the site has been demolished with no equipment or structure at the location it is assumed that this source is not in operation. The allowable emissions that were submitted in the 2011 emissions inventory are as follows; 34.9 tons per year of PM10, 31.5 tons per year of SO₂ and 94.5 tons per year of NO_x. After further review it is determined that Engelhard Corporation/Harshaw Filtrol should be removed from the revised SIP due to inactivity.

2.2.S Hercules (ATK/Bacchus)

Hercules is currently now two different companies and locations (Hexcel and Alliant Techsystems Incorporated). The two companies are owned by separate owners at separate sites. Hexcel is being reviewed as a listed point source in the revised SIP. Alliant Techsystems Incorporated operates the Bacchus Works Plant 1 at 5000 South 8400 West, West Valley City in Salt Lake County.

The following are the listed emissions in the original SIP for Hercules; 318 tons per year of PM10, 1 ton per year of SO2 and 238 tons per year of NOx. Since 1991 Alliant Techsystems Incorporated has separated operations from Hexcel and has the following emissions permitted under DAQE-AN104020050-15; 0.0023 tons per year of PM10, 0.71 tons per year of SO2 and 53.96 tons per year of NOx. The actual emissions that were submitted in the 2011 emissions inventory are combined with Hexcel and do not represent Alliant Techsystems Incorporated Bacchus actual site emissions.

After further review of Hercules/ Alliant Techsystems Incorporated should not be listed in the revised SIP due to the potential to emit emissions listed in DAQE-AN104020050-15 which are below the threshold values for a major source as defined in 40 CFR 70.2.

2.2.U

Interstate Brick

Interstate Brick owns and operates the Brick Manufacturing Plant at 9780 South 5200 West, West Jordan City in Salt Lake County.

The following are the listed emissions in the original SIP for Interstate Brick; 62 tons per year of PM10, 0 tons per year of SO2 and 46 tons per year of NOx. Since 1991 Interstate Brick has increased production and upgrade operations and has the following emissions permitted under DAQE-AN104230016-12; 61.29 ton per year of PM10, 79.68 tons per year of SO2 and 89.76 tons per year of NOx. The actual emissions that were submitted in the 2011 emissions inventory are as follows; 35.2 tons per year of PM10, 7.09 tons per year of SO2 and 11 tons per year of NOx.

After further review of Interstate Brick, the Brick Manufacture Plant should not be listed in the revised SIP due to the potential to emit emissions listed in DAQE-AN104230016-12 which are below the threshold values for a major source as defined in 40 CFR 70.2.

2.2.AA

Kennecott/Barney's Canyon

Kennecott has closed the Barney's Canyon Pit and has finished up reclaiming the land back to its natural state. The only emissions from this site are fugitive emissions from vehicles. Kennecott is in the process of revoking the Barney's Canyon permit. Kennecott/Barney's Canyon Pit should not be listed in the revised SIP due to the inactivity at the site.

2.2.CC

LDS Welfare Services

LDS Welfare Services owns and operates the site at 700 South 850 West, Salt Lake City in Salt Lake County. Since 1991 the LDS Welfare Services analyzed their operations and determine that this site qualifies as a Small Source under U.A.C. R307-401-9. In 2012 LDS Welfare Services submitted a request to revoke the DAQE-866-97 permit and submitted a request to register as a Small Source DAQE-EN103680004-12.

After further review of LDS Welfare Services operations should not be listed in the revised SIP due to the fact that the source qualifies as a small source under U.A.C. R307-401-9.

2.2.DD

LDS Hospital

LDS Hospital is known as the LDS Hospital Power Plant at 8th Avenue and C Street, Salt Lake City in Salt Lake County.

The following are the listed emissions in the original SIP for LDS Hospital; 11.7 tons per year of PM10, 235.1 tons per year of SO2 and 71.63 tons per year of NOx. Since 1991 LDS Hospital Power Plant has undated equipment and operations which results in the following emissions permitted under DAQE-AN103470002-10; 1.28 ton per year of PM10, 2.61 tons per year of SO2 and 22.62 tons per year of NOx. This source is now classified as a minor source. The actual emissions submitted in the 2011 emissions inventory are as follows; 0.58 tons per year of PM10, 0.04 tons per year of SO2 and 3.85 tons per year of NOx.

After further review of the LDS Hospital Power Plant should not be listed in the revised SIP due to the potential to emit emissions listed in DAQE-AN103470002-10 which are below the threshold values for a major source as defined in 40 CFR 70.2.

2.2.GG

Morton Salt/Bermister site

Morton Salt does not own or operate any salt harvesting operations in either Salt Lake, Utah or Davis counties. No emissions inventories have been submitted in the last 10 years and no permits are on file for Morton Salt in either Salt Lake, Utah or Davis counties. This source is not in operation either Salt Lake, Utah or Davis counties and should be removed from the revised SIP.

2.2.HH

Mountain Bell

Mountain Bell owns and operates an office building with backup generators at 205 East 200 South, Salt Lake City in Salt Lake County.

The following are the listed emissions in the original SIP for Mountain Bell; 0.31 tons per year of PM10 0.46 tons per year of SO2 and 3.9 tons per year of NOx. Since 1991 Mountain Bell has not changed operations. Mountain Bell is not required to have a permit under U.A.C. R307-401-9 small source exemption. The actual emissions that were submitted in the 2011 emissions inventory are as follows; 0.20 tons per year of PM10, 0.70 tons per year of SO2 and 5.48 tons per year of NOx.

After further review of Mountain Bell should not be listed in the revised SIP due to the potential to emit emissions are below the threshold values for a major source as defined in 40 CFR 70.2.

2.2.II

Mountain Fuel, 1st S 1078 W (Questar/SLC site)

Mountain Fuel now known as Questar owns and operates the North Operations Center at 100 South 1078 West, Salt Lake City in Salt Lake County.

The following are the listed emissions in the original SIP for Questar's North Operations Center; 1.67 tons per year of PM10, 0.61 tons per year of SO2 and 46.7 tons per year of NOx. Since 1991 Questar's North Operations Center has updated operations and has the following emissions permitted under DAQE-AN104320009-09; 0.17 ton per year of PM10 and 17.37 tons per year of NOx. This source is classified as a minor source. The actual emissions that were submitted in the 2011 emissions inventory are as follows; 0.32 tons per year of PM10, 0.22 tons per year of SO2 and 24.55 tons per year of NOx.

After further review, Questar's North Operations Center should not be listed in the revised SIP due to the potential to emit emissions listed in DAQE-AN104320009-09 which are below the threshold values for a major source as defined in 40 CFR 70.2.

2.2.JJ Mountain Fuel, general office
Mountain Fuel has not submitted an emissions inventory in the last 10 years and no permit is on file for source or company in either Salt Lake, Utah or Davis counties. This source is not operating any “general office sites” in either Salt Lake, Utah or Davis counties that would require a permit under UAC R307-401. After further review it is determined that Mountain Fuel should be removed from the revised SIP.

2.2.KK Murray City Power
Murray City Power now known as Murray City Power Department owns and operates the Electrical Generation Plant at 4800 South 157 West, in Salt Lake County.

The following are the listed emissions in the original SIP for Murray City Power Department’s Electrical Generation Plant; 1.62 tons per year of PM10, 2.38 tons per year of SO2 and 250 tons per year of NOx. Since 1991 Murray City Power Department’s Electrical Generation Plant has updated equipment and operations which has the following emissions permitted under DAQE-126-01; 10.9 tons per year of PM10, 1.2 tons per year of SO2 and 98.9 tons per year of NOx. This source is classified as a minor source. The actual emissions that were submitted in the 2011 emissions inventory are as follows; 1.05 tons per year of PM10, 0.08 tons per year of SO2 and 13.13 tons per year of NOx.

After further review the Murray City Power Department’s Electrical Generation Plant should not be listed in the revised SIP due to the potential to emit emissions listed in DAQE-126.01 being below the threshold values for a major source as defined in 40 CFR 70.2.

2.2.ZZ Utah Metal Works
Utah Metal Works now known as Utah Metal Works Incorporated owns and operates the Utah Metal Works Plant at 805 Everett Avenue, Salt Lake City in Salt Lake County.

The following are the listed emissions in the original SIP for Utah Metal Works Incorporated Plant; 4.27 tons per year of PM10, 0.01 tons per year of SO2 and 0.98 tons per year of NOx. Since 1991 Utah Metal Works Incorporated Plant has updated equipment and operations which has the following emissions permitted under DAQE-AN103370007-13; 12.94 tons per year of PM10, 1.89 tons per year of SO2 and 23.07 tons per year of NOx. This source is classified as a minor source. The actual emissions that were submitted in the 2011 emissions inventory are as follows; 9.55 tons per year of PM10, 3.07 tons per year of SO2 and 38.42 tons per year of NOx.

After further review of Utah Metal Works Incorporated Plant should not be listed in the revised SIP due to the potential to emit emissions listed in DAQE-AN103370007-13 being below the threshold values for a major source as defined in 40 CFR 70.2.

2.2.CCC V.A. Hospital
V.A. Hospital now known as Veterans Affairs Medical Center owns and operates the Veterans Affairs Medical Center at 500 Foothill Drive, Salt Lake City in Salt Lake County.

The following are the listed emissions in the original SIP for Veterans Affairs Medical Center; 0.5 tons per year of PM10, 0.04 tons per year of SO2 and 9.88 tons per year of NOx. Since 1991 Veterans Affairs Medical Center has updated equipment and

operations which has the following emissions permitted under DAQE-AN105520003-15; 2.2 tons per year of PM10, 0.04 tons per year of SO2 and 35.65 tons per year of NOx. This source is classified as a minor source. The actual emissions that were submitted in the 2011 emissions inventory are as follows; 0.58 tons per year of PM10, 0.43 tons per year of SO2 and 6.25 tons per year of NOx.

After further review of Veterans Affairs Medical Center should not be listed in the revised SIP due to the potential to emit emissions listed in DAQE-AN105520003-15 being below the threshold values for a major source as defined in 40 CFR 70.2.

Existing Source Growth

The following sources have had equipment updates or operational changes which have the existing permitted potential to emit emissions for PM10, SO2 or NOX higher than the original SIP limits; Interstate Brick, Murray City Power, Utah Metal Works and V.A. Hospital.

Interstate Brick

Interstate Brick has updated operations, equipment and increased production since 1991. Interstate Brick has undergone permit modifications for equipment and operational changes which require a BACT analysis as per U.A.C. R307-401. The SO2 emissions in the original SIP are 0 tons per year; DAQ had no mechanism to determine the SO2 emissions. Interstate Brick has gone through permit modifications requiring them to estimate the source wide potential to emit emissions for all criteria pollutants. Interstate Bricks permit DAQE-AN104230016-12 has the potential to emit SOX emissions at 79.68 tons per year.

The NOX emission listed in the original SIP are 46 tons per year. The NOX potential to emit emissions listed in DAQE-AN104230016-12 is 89.76 tons per year. Interstate Brick has increased production since 1991 and has undergone permit modifications which required a BACT analysis as per U.A.C. R307-401. The production increases resulted in a NOX emissions increase (43.76 tons per year) from the original SIP.

The PM10 emissions listed in DAQE-AN104230016-12 are 61.29 tons per year. The PM10 emission listed in the original SIP are 62 tons per year. Interstate Brick has been able to maintain the original SIP PM10 emissions limit during all the permit modifications and operational changes.

Murray City Power

Murray City Power has updated operations and or equipment since 1991 and increased PM10 emissions from the original SIP. Murray City Power has undergone permit modifications for equipment and operational changes which required a BACT analysis as per U.A.C. R307-401. The PM10 emissions in the original SIP are 1.62 tons per year. Murray City Power has gone through permit modifications requiring them to estimate the source wide potential to emit emissions for all criteria pollutants. Murray City Power permit DAQE-126-01 has the potential to emit PM10 emissions at 10.9 tons per year. The increases resulted in a PM10 emissions increase (9.28 tons per year) from the original SIP. Murray City Power has been able to maintain the original SIP SO2 and NOX emissions limits during all the permit modifications and operational changes.

Utah Metal Works

Utah Metal Works has updated operations and equipment since 1991 and increased PM10, SO2 and NOX emissions from the original SIP. Utah Metal Works has undergone permit modifications for equipment and operational changes which required a BACT analysis as per U.A.C. R307-401. The PM10 emissions in the original SIP are 4.27 tons per year, SO2 emissions are 0.01 tons per year and NOX emissions are 0.98 tons per year. Utah Metal Works has gone through permit modifications requiring them to estimate the source wide potential to emit emissions for all criteria pollutants. Utah Metal Works permit DAQE-

AN103370007-13 has the potential to emit PM10 emissions at 12.94 tons per year, SOX emissions at 1.89 tons per year and NOX emissions at 23.07 tons per year. The following are the emissions increases from the original SIP; 8.67 tons per year increase in PM10 emissions, 1.88 tons per year increase in SOX emissions and 22.09 tons per year increase in NOX emissions

V.A. Hospital

The V.A. Hospital has updated operations and or equipment since 1991 and increased PM10 and NOX emissions from the original SIP. The permit modifications for equipment and operational changes require a BACT analysis as per U.A.C. R307-401. The listed PM10 and NOX emissions limit in the original SIP are 4.27 tons per year of PM10 and 0.98 tons per year of NOX. V.A. Hospital has had some permit modifications requiring them to estimate the source wide potential to emit emissions for all criteria pollutants. V.A. Hospital permit DAQE- DAQE-AN105520003-15 has the potential to emit PM10 emissions at 12.94 tons per year and NOX emissions at 23.07 tons per year. The increases resulted in a PM10 emissions increase of 9.28 tons per year and NOX emissions increase of 22.09 tons per year from the original SIP. V.A. Hospital has been able to maintain the original SIP SO2 emissions limits during all the permit modifications and operational changes.

Overall Impact from Source Removal

With the closure of five sources out of the fourteen and the reductions in all most all other active sources, the overall reduction in emissions from the original SIP listed sources to the permitted sources are as follows; 675.27 tons per year of PM10, 889.20 tons per year of SO2, and 1477.05 tons per year of NOx.

The reductions are due to site closures, equipment technologies advances or operational changes. All of the sources listed in this document are below the threshold values for a major source as defined in 40 CFR 70.2. Listing any of these sources in the revised SIP with limits does not add any value in controlling emissions to maintain compliance with the PM10 NAAQ's.