State of Utah

GARY R. HERBERT
*Governor*

GREG BELL
*Lieutenant Governor*

Department of
Environmental Quality

Amanda Smith
*Executive Director*

DIVISION OF AIR QUALITY
Bryce C. Bird
*Director*



DAQ-079-13

# UTAH AIR QUALITY BOARD MEETING

## FINAL AGENDA

**Wednesday, October 2, 2013 - 1:30 p.m.**
**195 North 1950 West, Room 1015**
**Salt Lake City, Utah 84116**

I. Call-to-Order

II. Date of the Next Air Quality Board Meeting: November 6, 2013

III. Approval of the Minutes for September 4, 2013, Conference Call and September 11, 2013, Board Meeting.

IV. Final Adoption: R307-350. Miscellaneous Metal Parts and Products Coatings. Presented by Mark Berger.

V. Final Adoption: R307-401-7. Permit: New and Modified Sources. Public Notice. Presented by Mark Berger.

VI. Propose for Public Comment: Amend State Implementation Plan Section IX, Control Measures for Area and Point Sources, Part H, Emissions Limits. Presented by Bill Reiss.

VII. Propose for Public Comment: Amend R307-110-17. Section IX, Control Measures for Area and Point Sources, Part H, Emissions Limits. Presented by Mark Berger.

VIII. Informational Items.
   A. Toxicity of Wood Smoke Presentation. Presented by Brian Moench.
   B. Air Toxics. Presented by Robert Ford.
   C. Compliance. Presented by Jay Morris and Harold Burge.
   D. Monitoring. Presented by Kimberly Kreykes.
   E. Other Items to be Brought Before the Board.

In compliance with the American with Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Brooke Baker, Office of Human Resources at (801) 536-4412 (TDD 536-4414).

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**UTAH AIR QUALITY BOARD**
**TELEPHONE CONFERENCE CALL**
**September 4, 1013 – 4:00 p.m.**
**195 North 1950 West, Room 1015**
**Salt Lake City, Utah 84116**

**DRAFT MINUTES**

Board member present in person: Kathy Van Dame. Board members present by telephone: Steve Sands, Kerry Kelly, Robert Paine, Tammie Lucero, and Karma Thomson.

Excused: Craig Petersen, Michael Smith, and Amanda Smith

Bill Reiss, Environmental Engineer at DAQ, explained that the purpose of the conference call was to give the Board an explanation of the draft $PM_{2.5}$ state implementation plans (SIPs) for the Salt Lake City and Provo nonattainment areas which will be presented at the October board meeting. Both SIPs show attainment by 2019 making full use of EPA's discretion and extending the statutory attainment date to the full 10 years from the date of area designations.

The Board was advised not to compare the numbers of these current versions of the SIPs with prior draft copies because new numbers have been used. Some of the changes today from past versions include more recent monitoring data being used which allows for reassessment of the monitored design values used in the analysis. These are the values which are needed to come down to the 35 micrograms level of the national ambient air quality standard in order to show attainment. Updated growth projections from the Governor's Office of Management and Budget have been included. In addition, the reasonable available control technology (RACT) and mobile numbers are now finalized. These SIPs no longer rely on any additional SIP strategies in order to show attainment and everything in these SIPs is an on-the-books control. Mr. Reiss then went through each chapter and gave an explanations of any changes as well as answering questions from the Board.

It was explained that Section IX, Part H, which is the companion piece of these SIPs of the emission limits for the large industrial sources, is not included at this time but will be available for the October meeting. The RACT analysis of the emission limits has been completed. The RACT report for the large industrial sources is part of the technical support of these SIPs and will be available at the start of the public comment period. Mr. Reiss also added that a banking and offsetting program for small minor sources is no longer being considered. He explained there were three options being considered on this issue which included a new rule for minor sources of $PM_{2.5}$, a new rule that would have incorporated what we have for $PM_{10}$ and ozone into a comprehensive minor source offsetting rule, or do nothing. DAQ has opted to not do either new rule and to move forward with these SIPs.

**UTAH AIR QUALITY BOARD MEETING**
**September 11, 2013 – 9:00 a.m.**
**195 North 1950 West, Room 1015**
**Salt Lake City, Utah 84116**

**DRAFT MINUTES**

## I. Call-to-Order

Steve Sands called the meeting to order at 9:02 a.m.

Board members present: Steve Sands, Kerry Kelly, Karma Thomson, Robert Paine, Tammie Lucero, Kathy Van Dame (attendance by telephone), Craig Petersen (attendance by telephone), and Brad Johnson (acting for Amanda Smith)

Excused: Amanda Smith and Michael Smith

Executive Secretary: Bryce Bird

## II. Date of the Next Air Quality Board Meeting: October 2, 2013

## III. Approval of the Minutes for August 7, 2013, Working Lunch Session and Board Meeting.

Ms. Van Dame made a typographical correction on page two of the Board meeting minutes changing “form” to “from.”

- Karma Thomson moved to approve the minutes as corrected. Tammie Lucero seconded. The Board approved unanimously.

## IV. Final Adoption: Amend R307-214. National Emission Standards for Hazardous Air Pollutants. Presented by Mark Berger.

Mark Berger, Environmental Planning Consultant at DAQ, stated that on June 5, 2013, the Board proposed for public comment amendments to R307-214 to update the version of 40 CFR Parts 61 and 63 incorporated by reference to the July 1, 2012, version. A 30-day public comment was held during which no comments were received and no public hearing was requested. Staff recommends the Board adopt R307-214, National Emission Standards for Hazardous Air Pollutants, as proposed.

- Kathy Van Dame moved that the Board approve the amended R307-214, National Emission

Standards for Hazardous Air Pollutants. Robert Paine seconded. The Board approved unanimously.

## V. Final Adoption: R307-361. Architectural Coatings. Presented by Mark Berger.

Mark Berger, Environmental Planning Consultant at DAQ, stated that on June 5, 2013, the Board proposed for public comment new rule R307-361, Architectural Coatings. The purpose of the rule is to limit volatile organic compound (VOC) emissions from architectural coatings by specifying maximum VOC content for various architectural coatings, including primers, sealers, shellacs, and stains. During the 30-day public comment period comments were received which led staff to make some recommended changes to the original proposed rule. The changes include adding an exemption for the Department of Defense contractors who perform contractor work that explicitly mandates the use of military technical data specifications; changing the sell-through provision to clarify that coatings manufactured prior to January 1, 2015, may be sold for up to three years after January 1, 2015, can be applied at any time; and making typographical corrections. Staff recommends the Board adopt R307-361, Architectural Coatings, as amended.

- Kerry Kelly moved that the Board adopt R307-361, Architectural Coatings. Karma Thomson seconded. The Board approved unanimously.

## VI. Proposed for Public Comment with Department Fee Schedule: Operating Permit Program Fee for Fiscal Year 2015. Presented by David Beatty.

David Beatty, Operating Permits Section Manager at DAQ, stated that each year an annual emissions fee is established to fund the operating permits program. For fiscal year 2015 DAQ is proposing a fee of $59.06 per ton of emissions which is an increase of $5.32 from fiscal year 2014. There was a significant decrease in tonnage, about 6,000 tons in chargeable emissions from last year, which is the main reason for the increase. Staff recommends the Board submit as part of the Department's fee package the $59.06 per ton of emissions for fiscal year 2015.

In discussion with the Board, Mr. Beatty explained that part of the tonnage decrease this year was taking into account PacifiCorp's Carbon power plant scheduled shut down in April 2015 which amounts to approximately 8,300 tons of the fee and will also result in a partial refund back to PacifiCorp during the end of fiscal year 2015. In addition, DAQ is currently evaluating changes in the structure so that it could charge more for a hazardous air pollutants fee and possibly increase the cap from 4,000 tons to a higher level. These two changes would require a statute change.

- Robert Paine moved that the Board propose for public comment the Department fee structure for the operating permit program fee for fiscal year 2015. Tammie Lucero seconded. The Board approved unanimously.

## VII. Propose for Public Comment: Amend R307-121. General Requirements: Clean Air and Efficient Vehicle Tax Credit. Presented by Mark Berger.

Mark Berger, Environmental Planning Consultant at DAQ, stated that during the 2013 legislative session the Legislature revised the statute governing the state's clean fuel tax credit through House Bill 96. The bill modified the eligibility requirements to claim the tax credit. The amendments to R307-121 would align the requirements of the rule with those in the Utah Code. Changes to the rule include removing the definitions for "fuel economy standards" and "plug-in electric drive motor vehicle"; adding a definition of qualifying electric or hybrid vehicle; removing the word "compressed" throughout; changing the title of R307-121-4 ; making changes to the rule to streamline the eligibility requirements for converted vehicles; and adding requirements throughout that the purchase order, customer invoice, or receipt and the current Utah vehicle registration be in the name of the taxpayer. Staff recommends the Board propose for public comment the amended R307-121, General Requirements: Clean Air and Efficient Vehicle Tax Credit, for public comment.

- Kathy Van Dame moved that the Board propose for public comment the amended R307-121, General Requirements: Clean Air and Efficient Vehicle Tax Credit. Kerry Kelly seconded. The Board approved unanimously.

**VIII. Propose for Public Comment: Amend R307-123. General Requirements: Clean Fuels and Vehicle Technology Grant and Loan Program. Presented by Mark Berger.**

Mark Berger, Environmental Planning Consultant at DAQ, stated that on April 8, 2011, the EPA finalized rulemaking to streamline and expand its process to allow for intermediate and out-of-useful-life vehicles to be converted to run on alternate fuels such as compressed natural gas. Part of the proposed amendments to R307-123 would align Utah's rule with EPA's new rule. In addition, staff is recommending the Board add demonstration of eligibility requirements for vehicles converted to electricity and to add further criteria for demonstration of eligibility for retrofitted vehicles in order to verify that the condition of the vehicle prior to the installation of the retrofit is compliant with the retrofit's certification criteria. Staff recommends the Board propose the amended R307-123, General Requirements: Clean Fuels and Vehicle Technology Grant and Loan Program, for public comment.

- Kerry Kelly moved that the Board propose for public comment the amended R307-123, General Requirements: Clean Fuels and Vehicle Technology Grant and Loan Program. Karma Thomson seconded. The Board approved unanimously.

**IX. Propose for Public Comment: Amend R307-403-1. Purpose and Definitions. Presented by Mark Berger.**

Mark Berger, Environmental Planning Consultant at DAQ, stated that on May 1, 2013, the Board adopted revisions to R307-403 which included the establishment of VOC's and $PM_{2.5}$ precursors in Utah's $PM_{2.5}$ nonattainment areas. When R307-403 was brought before the Board in May 2013 it did not include a significance level for VOCs. Significance levels are used to determine whether a modification at a major source is a major modification. This new amendment adds the significance levels for VOCs at 40 tons per year. Staff recommends the Board propose for public comment R307-403-1, Purpose and Definitions, as proposed.

In discussion, staff noted that the significance level for the state implementation plan (SIP) inclusion as a major source is 100 tons and staff clarified that the significance level for R307-403 is for permitting purposes only.

- Robert Paine moved that the Board propose for public comment the amended R3078-403-1, Purpose and Definitions. Kerry Kelly seconded. The Board approved unanimously.

**X. Propose for Public Comment: Add a new SIP Subsection IX.A.21: Control Measures for Area and Point Sources, Fine Particulate Matter, $PM_{2.5}$ SIP for the Salt Lake City, UT Nonattainment Area. Presented by Bill Reiss.**

Bill Reiss, Environmental Engineer at DAQ, stated that both the Salt Lake City and Provo SIPs for the Board's review show attainment of the $PM_{2.5}$ 24-hour standard by 2019, which includes EPA's discretion of granting Utah a five year extension. Everything in the plan is a concrete strategy in this demonstration of attainment. Changes in the analysis that led to attainment includes recent monitoring data that factors in 2012 monitoring data, more recent growth projections from the Governor's office, the completion of reasonable available control technology (RACT) numbers, and the mobile numbers have been finalized.

Part H of the SIP, which is a companion piece to the SIP narrative, is not included at this time but will be available at the October board meeting. Part H will include emission limits for the large stationary sources that go into the SIP. The RACT analysis will be packaged into an overall report that summarizes RACT and reasonably available control measure (RACM) for some of the other source categories. The RACT analysis will be part of the technical support behind the SIP and will be available at the start of the public comment period.

Mr. Reiss gave a brief presentation of the timeline showing the whole planning process surrounding a new national ambient air quality standard (NAAQS) for the Salt Lake City and Provo SIPs. He covered the $PM_{2.5}$ attainment demonstration and the modeled $PM_{2.5}$ concentrations for 2019 as predicted by the air quality model, as well as describing emission trends and emissions reductions by source category. It was also noted that although the Federal Tier II motor vehicle emissions program is not part of the SIP control strategy, it is still responsible for large reductions in emissions throughout the SIP planning period.

In discussion with the Board, Mr. Reiss answered questions from the Board. He added that changes made since the packet was mailed and since the conference call meeting include filling in the modeling run information for 2014 and 2017; point source information was changed to reflect changes made when some sources from Tooele County that didn't reside in the nonattainment area were removed; and the trading ratios for the purpose of transportation conformity were added. In addition, it was noted there is nothing in these SIPs regarding banking and offsetting for minor sources because there would be no SIP credit, and also because of the shortage of credits in a lot of the areas it would limit permitting some of the small sources. There is already a minor source rule for $PM_{10}$ that continues to apply in the core areas of the $PM_{2.5}$ nonattainment areas. It was also noted that a table showing the comments received and any changes made to the SIPs will be posted on the DAQ web page, as well as a summary table, source by source, of the RACT analysis.

- Tammie Lucero moved that the Board propose for public comment to add new SIP Subsection IX.A.21: Control Measures for Area and Point Sources, Fine Particulate Matter, $PM_{2.5}$ SIP for the Salt Lake City, UT Nonattainment Area. Kerry Kelly seconded. The Board approved unanimously.

## XI. Propose for Public Comment: Add a new SIP Subsection IX.A.22: Control Measures for Area and Point Sources, Fine Particulate Matter, $PM_{2.5}$ SIP for the Provo, UT Nonattainment Area. Presented by Bill Reiss.

Bill Reiss, Environmental Engineer at DAQ, stated that the Provo, Utah SIP is similar in structure and content as was just discussed for the Salt Lake City SIP.

- Kerry Kelly moved that the Board propose for public comment to add new SIP Subsection IX.A.22: Control Measures for Area and Point Sources, Fine Particulate Matter, $PM_{2.5}$ SIP for the Provo, UT Nonattainment Area. Robert Paine seconded. The Board approved unanimously.

Public comment from Susan Hardy of the Mountainland Association of Governments was introduced. Ms. Hardy thanked and acknowledged the tremendous amount of work the DAQ staff did in getting to this point on these SIPs. EPA came up with a complicated motor vehicle emissions simulator (MOVES) model which the Mobile Source Section staff was able to use to get information to the metropolitan planning organizations so these SIPs could move forward.

**XII. Propose for Public Comment: Amend R307-110-10. Section IX, Control Measures for Area and Point Sources, Part A, Fine Particulate Matter. Presented by Mark Berger.**

Mark Berger, Environmental Planning Consultant at DAQ, stated that in order to submit a complete SIP to the EPA, DAQ needs to show that its SIP has been incorporated into Administrative Rules. R-307-110-10 is the rule that presently incorporates the $PM_{2.5}$ SIPs in the rule. This proposed amendment to R307-110-10 would incorporate the newly updated SIP Section IX Part A into the rules, if the final $PM_{2.5}$ SIPs are adopted by the Board. Mr. Berger also explained that to accommodate a 30-day public comment period, this rule is being proposed now to expedite DAQ's submittal to EPA, at which time the final date will be inserted into the rule. Staff recommends the Board propose the amended R307-110-10, Section IX, Control Measures for Area and Point Sources, Part A, Fine Particulate Matter, for public comment.

- Robert Paine moved that the Board propose for public comment the amended R307-110-10, Section IX, Control Measures for Area and Point Sources, Part A, Fine Particulate Matter. Tammie Lucero seconded. The Board approved unanimously.

Mr. Berger added that DAQ will be holding three public hearings for the Salt Lake City and Provo $PM_{2.5}$ SIPs. It is requested that a Board member act as hearing officer at each of the meetings to be held on October 8 at 10:00 a.m. in Ogden, October 9 at 9:00 a.m. in Provo, and October 15 at 10:00 a.m. in Salt Lake City. After discussion, Ms. Kelly will act as hearing officer on October 8; Ms. Lucero will act as hearing officer on October 9; and Ms. Van Dame will act as hearing officer on October 15.

**XIII. Informational Items.**

**A. Air Toxics. Presented by Robert Ford.**

**B. Compliance. Presented by Jay Morris and Harold Burge.**

Harold Burger, Major Compliance Section Manager at DAQ, updated that DAQ issued Stericycle an amended notice of violation to include language that better clarifies that DAQ is pursuing violations for the NOx exceedances. The source has until the end of September to file a request for agency action for a hearing if they want to contest the violation. DAQ continues to work with Stericycle trying to achieve a settlement.

**C. Monitoring. Presented by Kimberly Kreykes.**

Kimberly Kreykes updated the Board on the monitoring graphs.

**D. Other Items to be Brought Before the Board.**

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Meeting adjourned at 10:44 a.m.

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DAQ-080-13

**M E M O R A N D U M**

**TO:** Air Quality Board

**THROUGH:** Bryce C. Bird, Executive Secretary

**FROM:** Joel Karmazyn, Environmental Scientist

**DATE:** September 19, 2013

**SUBJECT:** FINAL ADOPTION: Amend R307-350. Miscellaneous Metal Parts and Products Coatings.

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The Board released amendments of R307-350 for public comment from August 1 to September 3, 2013, that included the following proposals:

1. To exempt military technical data orders.
2. To exempt cured foam.
3. To clarify that the potential to emit applies to all miscellaneous metal product parts surface coating operations.
4. Realign the definition of coating with the federal definition found in 40 CFR Part 63 (FR Vol. 69, No. 1, Friday, January 2, 2004).

<u>Public Comments</u>

1. L-3 Communications pointed out that military contractors must also meet military technical data orders. A recommendation was made to exclude these operations conducted off military installations as well.

   DAQ Response: Staff concurs, the change has been made.

2. Utility trailer submitted a supporting statement for exempting cured foam.

<u>Staff Recommendation</u>: Staff recommends the Board adopt R307-350 as amended.

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**R307. Environmental Quality, Air Quality.**
**R307-350. Miscellaneous Metal Parts and Products Coatings.**
**R307-350-1. Purpose.**

The purpose of R307-350 is to limit volatile organic compound (VOC) emissions from miscellaneous metal parts and products coating operations.

**R307-350-2. Applicability.**

(1) R307-350 applies to sources located in Cache, Davis, Salt Lake, Utah and Weber counties where the potential to emit VOC emissions from all miscellaneous metal product parts surface coating operations, including related cleaning activities, is 2.7 tons per year or more.

(2) In Box Elder and Tooele counties, R307-350 applies to the following sources:

(a) Existing sources as of February 1, 2013, with the potential to emit 5 tons per year or more of VOC, including related cleaning activities; and

(b) New sources as of February 1, 2013, that have the potential to emit 2.7 tons per year or more of VOC, including related cleaning activities.

(3) R307-350 applies to, but is not limited to, the following industries:

(a) Large farm machinery (harvesting, fertilizing, planting, tractors, combines, etc.);

(b) Small farm machinery (lawn and garden tractors, lawn mowers, rototillers, etc.)

(c) Small appliance (fans, mixers, blenders, crock pots, vacuum cleaners, etc.);

(d) Commercial machinery (computers, typewriters, calculators, vending machines, etc.);

(e) Industrial machinery (pumps, compressors, conveyor components, fans, blowers, transformers, etc.);

(f) Fabricated metal products (metal covered doors, frames, trailer frames, etc.); and

(g) Any other industrial category that coats metal parts or products under the standard Industrial Classification Code of major group 33 (primary metal industries), major group 34 (fabricated metal products), major group 35 (nonelectric machinery), major group 36 (electrical machinery), major group 37 (transportation equipment) major group 38 (miscellaneous instruments), and major group 39 (miscellaneous manufacturing industries).

**R307-350-3. Exemptions.**

(1) The requirements of R307-350 do not apply to the following:

(a) The surface coating of automobiles and light-duty trucks;

(b) Flat metal sheets and strips in the form of rolls or coils;

(c) Surface coating of aerospace vehicles and components;

(d) Automobile refinishing;

(e) The exterior of marine vessels;

(f) Customized top coating of automobiles and trucks if production is less than 35 vehicles per day;[ ~~or~~]

(g) Military munitions manufactured by or for the Armed Forces of the United States;

(h) Operations that are exclusively covered by Department of Defense military technical data and performed by a Department of Defense contractor and/or on site at installations owned and[–]/or operated by the United States Armed Forces; or

(i) Stripping of cured coatings and adhesives.

(2) The requirements of R307-350-5 do not apply to the following:

(a) Stencil coatings;

(b) Safety-indicating coatings;

(c) Solid-film lubricants;

(d) Electric-insulating and thermal-conducting coatings;

(e) Magnetic data storage disk coatings; or

(f) Plastic extruded onto metal parts to form a coating.

(3) The requirements of R307-350-6 do not apply to the following:

(a) Touch-up coatings;

(b) Repair coatings; or

(c) Textured finishes.

**R307-350-4. Definitions.**

The following additional definitions apply to R307-350:

"Aerospace vehicles and component" means any fabricated part, processed part, assembly of parts, or completed unit, with the exception of electronic components, of any aircraft including but not limited to airplanes, helicopters, missiles, rockets and space vehicles.

"Air dried coating" means coatings that are dried by the use of air or a forced warm air at temperatures up to 194 degrees Fahrenheit.

"Baked coating" means coatings that are cured at a temperature at or above 194 degrees Fahrenheit.

"Camouflage coating" means coatings that are used, principally by the military, to conceal equipment from detection.

"Coating" means a material applied to a substrate for decorative, protective, or functional purposes.

(1) Such materials include, but are not limited to, paints, sealants, liquid plastic coatings, caulks, inks, adhesives, and maskants.

(2) Decorative, protective, or functional materials that consist only of protective oils for metal, acids, bases, or any combination of these substances, or paper film or plastic film which may be pre-coated with an adhesive by the film manufacturer, are not considered coatings.

"Coating application System" means all operations and equipment that applies, conveys, and dries a surface coating, including, but not limited to, spray booths, flow coaters, flash off areas, air dryers and ovens.

“Cured coating or adhesive” means a coating or adhesive, which is dry to the touch.

“Department of Defense military technical data” means a specification that specifies design requirements, such as materials to be used, how a requirement is to be achieved, or how an item is to be fabricated or constructed.

"Dip coating" means a method of applying coatings to a substrate by submersion into and removal from a coating bath.

"Electric-insulating varnish" means a non-convertible-type coating applied to electric motors, components of electric motors, or power transformers, to provide electrical, mechanical, and environmental protection or resistance.

"Electric-insulating and thermal-conducting" means a coating that displays an electrical insulation of at least 1000 volts DC per mil on a flat test plate and an average thermal conductivity of at least 0.27 BTU per hour-foot-degree-Fahrenheit.

"Electrostatic application" means a method of applying coating particles or coating droplets to a grounded substrate by electrically charging them.

"Etching filler" mean a coating that contains less than 23% solids by weight and at least 0.5% acid by weight, and is used instead of applying a pretreatment coating followed by a primer.

"Extreme high-gloss coating" means a coating which, when tested by the American Society for Testing Material (ASTM) Test Method D-523 adopted in 1980, shows a reflectance of 75 or more on a 60 degree meter.

"Extreme performance coatings" means coatings designed for harsh exposure or extreme environmental conditions.

"Flow coat" means a non-atomized technique of applying coatings to a substrate with a fluid nozzle in a fan pattern with no air supplied to the nozzle.

"Heat-resistant coating" means a coating that must withstand a temperature of at least 400 degrees Fahrenheit during normal use.

"High-performance architectural coating" means a coating used to protect architectural subsections and which meets the requirements of the Architectural Aluminum Manufacturer Association's publication number AAMA 605.2-1980.

"High-temperature coating" means a coating that is certified to with-stand a temperature of 1,000 degrees Fahrenheit for 24 hours.

"High-volume, low-pressure (HVLP) spray" means a coating application system which is designed to be operated and which is operated between 0.1 and 10 pounds per square inch gauge (psig) air pressure, measured dynamically at the center of the air cap and the air horns.

"Magnetic data storage disk coating" means a coating used on a metal disk which stores data magnetically.

"Metallic coating" means a coating which contains more than 5 grams of metal particles per liter of coating, applied.

"Military specification coating" means a coating applied to metal parts and products and which has a formulation approved by a United States military agency for use on military equipment.

"Mold-seal coating" means the initial coating applied to a new mold or repaired mold to provide a smooth surface which, when coated with a mold release coating, prevents products from sticking to the mold.

"Multi-component coating" means a coating requiring the addition of a separate reactive resin, commonly known as a catalyst or hardener, before application to form an acceptable dry film.

"One-component coating" means a coating that is ready for application as it comes out of its container to form an acceptable dry film. A thinner, necessary to reduce the viscosity, is not considered a component.

"Pan backing coating" means a coating applied to the surface of pots, pans, or other cooking implements that are exposed directly to a flame or other heating elements.

"Prefabricated architectural component coatings" means coatings applied to metal parts and products that are to be used as an architectural structure or their appurtenances including, but not limited to, hand railings, cabinets, bathroom and kitchen fixtures, fences, rain-gutters and down-spouts, window screens, lamp-posts, heating and air conditioning equipment, other mechanical equipment, and large fixed stationary tools.

"Pretreatment coating" means a coating which contains no more than 12% solids by weight, and at least 0.5% acid, by weight, is used to provide surface etching, and is applied directly to metal surfaces to provide corrosion resistance, adhesion, and ease of stripping.

"Primer" means a coating applied to a surface to provide a firm bond between the substrate and subsequent coats.

"Repair coating" means a coating used to recoat portions of a part or product which has sustained mechanical damage to the coating.

"Safety-indicating coating" means a coating which changes physical characteristics, such as color, to indicate unsafe condition.

"Silicone release coating" means any coating which contains silicone resin and is intended to prevent food from sticking to metal surfaces.

"Solar-absorbent coating" means a coating which has as its prime purpose the absorption of solar radiation.

"Solid-film lubricant" means a very thin coating consisting of a binder system containing as its chief pigment material one or more of molybdenum disulfide, graphite, polytetrafluoroethylene (PTEF) or other solids that act as a dry lubricant between faying surfaces.

"Stencil coating" means an ink or a coating which is rolled or brushed onto a template or stamp in order to add identifying letters or numbers to metal parts and products.

"Textured finish" means a rough surface produced by spraying and splattering large drops of coating onto a previously applied coating. The coatings used to form the appearance of the textured finish are referred to as textured coatings.

"Touch-up coating" means a coating used to cover minor coating imperfections appearing after the main coating operation.

"Vacuum-metalizing coating" means the undercoat applied to the substrate on which the metal is deposited or the overcoat applied directly to the metal film.

**R307-350-5. Emission Standards.**

(1) Each owner or operator shall not apply coatings with a VOC content in excess of the amounts specified in Table 1 or shall use an add-on control device as specified in R307-350-8.

TABLE 1

METAL PARTS AND PRODUCTS VOC CONTENT LIMITS
(values in pounds of VOC per gallon of coating, minus water and exempt solvents (compounds not classified as VOC)), as applied)

| COATING CATEGORY | VOC CONTENT LIMIT | |
|---|---|---|
| | Air Dried | Baked |
| General One Component | 2.8 | 2.3 |
| General Multi Component | 2.8 | 2.3 |
| Camouflage | 3.5 | 3.5 |
| Electric-Insulating varnish | 3.5 | 3.5 |
| Etching Filler | 3.5 | 3.5 |
| Extreme High-Gloss | 3.5 | 3.0 |
| Extreme Performance | 3.5 | 3.0 |
| Heat-Resistant | 3.5 | 3.0 |
| High Performance architectural | 6.2 | 6.2 |
| High Temperature | 3.5 | 3.5 |
| Metallic | 3.5 | 3.5 |
| Military Specification | 2.8 | 2.3 |
| Mold-Seal | 3.5 | 3.5 |
| Pan Backing | 3.5 | 3.5 |
| Prefabricated Architectural Multi-Component | 3.5 | 2.3 |
| Prefabricated Architectural One-Component | 3.5 | 2.3 |
| Pretreatment Coatings | 3.5 | 3.5 |
| Repair and Touch Up | 3.5 | 3.0 |
| Silicone Release | 3.5 | 3.5 |
| Solar-Absorbent | 3.5 | 3.0 |

| | | |
|---|---|---|
| Vacuum-Metalizing | 3.5 | 3.5 |
| Drum Coating, New, Exterior | 2.8 | 2.8 |
| Drum Coating, New, Interior | 3.5 | 3.5 |
| Drum Coating, Reconditioned, Exterior | 3.5 | 3.5 |
| Drum Coating, Reconditioned, Interior | 4.2 | 4.2 |

(2) If more than one content limit indicated in this section applies to a specific coating, then the most stringent content limit shall apply.

**R307-350-6. Application Methods.**

No owner or operator of a facility shall apply VOC containing coatings to metal parts and products unless the coating is applied with equipment operated according to the equipment manufacturer specifications, and by the use of one of the following methods:

(1) Electrostatic application;

(2) Flow coat;

(3) Dip/electrodeposition coat;

(4) Roll coat;

(5) High-volume, low-pressure (HVLP) spray;

(6) Hand Application Methods;

(7) Airless or air-assisted airless spray may also be use for metal coatings with a viscosity of 15,000 centipoise or greater, as supplied; or

(8) Another application method capable of achieving transfer efficiency equivalent or better to HVLP spray, as certified by the manufacturer.

**R307-350-7. Work Practices and Recordkeeping.**

(1) Control techniques and work practices shall be implemented at all times to reduce VOC emissions from fugitive type sources. Control techniques and work practices shall include, but are not limited to:

(a) Storing all VOC-containing coatings, thinners, and coating-related waste materials in closed containers;

(b) Ensuring that mixing and storage containers used for VOC-containing coatings, thinners, and coating-related waste material are kept closed at all times except when depositing or removing these materials;

(c) Minimizing spills of VOC-containing coatings, thinners, and coating-related waste materials; and

(d) Conveying VOC-containing coatings, thinners, and coating-related waste materials from one location to another in closed container or pipes; and

(e) Minimizing VOC emission from cleaning of application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

(2) All persons shall perform solvent cleaning operations with cleaning material having VOC content of 0.21 pounds per gallon or less.

(3) All sources subject to R307-350 shall maintain records demonstrating compliance with all provisions of R307-350 on an annual basis.

(a) Records shall include, but not be limited to, inventory and product data sheets of all coatings and solvents subject to R307-350.

(b) These records shall be available to the director upon request.

**R307-350-8. Optional Add-On Controls.**

(1) The owner or operator may install and maintain an incinerator, carbon adsorption, or any other add-on emission control device, provided that the emission control device will attain at least 90% efficiency performance.

(2) The owner or operator of a control device shall provide documentation that the emission control system will attain the requirements of R307-350-8.

(3) Emission control systems shall be operated and maintained in accordance with the manufacturer recommendations. The owner or operator shall maintain for a minimum of two years records of operating and maintenance sufficient to demonstrate that the equipment is being operated and maintained in accordance with the manufacturer recommendations.

**R307-350-9. Compliance Schedule.**

[~~(1)~~ ]All sources [~~within Davis and Salt Lake counties~~] shall be in compliance with the requirements of R307-350 by [~~September 1, 2013~~]January 1, 2014.

[~~(2) All sources in Box Elder, Cache, Tooele, Utah and Weber counties shall be in compliance with R307-350 by January 1, 2014.~~]

**KEY: air pollution, emission controls, coatings, miscellaneous metal parts**

**Date of Enactment or Last Substantive Amendment: [~~February 1,~~ ]2014**

**Authorizing, and Implemented or Interpreted Law: 19-2-104(1)(a)**

State of Utah

GARY R. HERBERT
*Governor*

GREG BELL
*Lieutenant Governor*

Department of
Environmental Quality

Amanda Smith
*Executive Director*

DIVISION OF AIR QUALITY
Bryce C. Bird
*Director*

DAQ-081-13

**M E M O R A N D U M**

**TO:** Air Quality Board

**THROUGH:** Bryce C. Bird, Executive Secretary

**FROM:** Colleen Delaney, Environmental Scientist

**DATE:** September 19, 2013

**SUBJECT:** FINAL ADOPTION: R307-401-7. Public Notice.

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On July 3, 2013, the Board proposed revisions to R307-401-7, Public Notice, to require a 30-day public comment period prior to issuing an approval order for any new or modified stationary source. The rule currently allows a 10-day public comment period for some approval orders. A 30-day comment period for this proposed rule change was held from August 1 to August 30, 2013. A public hearing was not requested and no comments were received.

Staff Recommendation: Staff recommends the Board adopt the amendments to R307-401-7, Public Notice, as proposed.

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Mailing Address: P.O. Box 144820 • Salt Lake City, Utah 84114-4820
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**R307. Environmental Quality, Air Quality.**
**R307-401. Permit: New and Modified Sources.**
**R307-401-7. Public Notice.**

(1) Issuing the Notice. Prior to issuing an approval or disapproval order, the director will advertise intent to approve or disapprove in a newspaper of general circulation in the locality of the proposed construction, installation, modification, relocation or establishment.

(2) Opportunity for Review and Comment.

(a) At least one location will be provided where the information submitted by the owner or operator, the director's analysis of the notice of intent proposal, and the proposed approval order conditions will be available for public inspection.

(b) Public Comment.

(i) A 30-day public comment period will be established.

(ii) A request to extend the length of the comment period, up to 30 days, may be submitted to the director within 15 days of the date the notice in R307-401-7(1) is published.

(iii) Public Hearing. A request for a hearing on the proposed approval or disapproval order may be submitted to the director within 15 days of the date the notice in R307-401-7(1) is published.

(iv) The hearing will be held in the area of the proposed construction, installation, modification, relocation or establishment.

(v) The public comment and hearing procedure shall not be required when an order is issued for the purpose of extending the time required by the director to review plans and specifications.

(3) The director will consider all comments received during the public comment period and at the public hearing and, if appropriate, will make changes to the proposal in response to comments before issuing an approval order or disapproval order.

**KEY: air pollution, permits, approval orders, greenhouse gases**
**Date of Enactment or Last Substantive Amendment: 2013**
**Notice of Continuation: June 6, 2012**
**Authorizing, and Implemented or Interpreted Law: 19-2-104(3)(q); 19-2-108**

State of Utah

GARY R. HERBERT
*Governor*

GREG BELL
*Lieutenant Governor*

Department of
Environmental Quality

Amanda Smith
*Executive Director*

DIVISION OF AIR QUALITY
Bryce C. Bird
*Director*

DAQ-083-13

**M E M O R A N D U M**

**TO:** Air Quality Board

**THROUGH:** Bryce C. Bird, Executive Secretary

**FROM:** Bill Reiss, Environmental Engineer

**DATE:** September 20, 2013

**SUBJECT:** PROPOSE FOR PUBLIC COMMENT: Add new SIP Subsections IX.H.11, 12 and 13. Control Measures for Area and Point Sources, Emission Limits and Operating Practices, $PM_{2.5}$ Requirements.

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On December 14, 2009, the Environmental Protection Agency (EPA) made its designations concerning areas that were not attaining the 2006 National Ambient Air Quality Standards (NAAQS) for $PM_{2.5}$. Among those areas designated were the Salt Lake City – UT $PM_{2.5}$ nonattainment area and the Provo – UT $PM_{2.5}$ nonattainment area.

The Clean Air Act requires Utah to submit a nonattainment plan for each of these areas. Those plans shall provide for the implementation of all reasonable control measures and include enforceable emission limitations and other control measures as well as schedules and timetables for compliance.

For several years, the Utah Division of Air Quality, in consultation with the many stakeholders along the Wasatch Front, has been working to develop a State Implementation Plan (SIP) to address nonattainment of the 24-hour NAAQS for $PM_{2.5}$. The attached document addresses the requirement to include emission limitations, control measures, and schedules for certain large stationary sources.

Subsection IX.H.11 includes general provisions that apply to sources listed in either nonattainment area, while subsections IX.H.12 and 13 apply to specific sources located in the Salt Lake City and Provo nonattainment areas respectively.

Staff Recommendation: Staff recommends that SIP Subsection IX.H.11, 12 and 13. Control Measures for Area and Point Sources, Emission Limits and Operating Practices, $PM_{2.5}$ Requirements be proposed for public comment.

# Point Source Reduction Summary

| Source Name | Emission Point | Pollutant | BACT/RACT | Cost Efficiency | Reduction | Implementation | Notes |
|---|---|---|---|---|---|---|---|
| **General Refinery** | Heaters & Boilers | SO2 | Fuel gas limit 60 ppmv | <$5,000/ton | Variable | 2019 | Ja requirements |
| | Cooling Tower | VOC | Enhanced monitoring & repair | <$5,000/ton | Variable | 2019 | CC requirements |
| | Flares | VOC | Flare gas recovery | $10,000 (EPA) to $85,000 (highest refinery est.) | Less than<br>5 tpy PM<br>20 tpy SO2<br>30 tpy NOx<br>30 tpy VOC | 2019 | Ja requirements |
| | Fugitives | VOC | Enhanced Leak Detection And Repair (ELDAR) | <$5,000/ton | EPA estimates 1,200 tpy | 2019 | GGGa requirements |
| | Tanks | VOC | Degassing controls | <$2,500/ton | Variable | 2019 | Vapor recovery or control |
| | Wastewater | VOC | Currently RACT/BACT | N/A | N/A | 2014 | |
| **Big West** | FCCU | PM | Flue gas filter | $44,631/ton | 34 tpy | 2019 | |
| | | SO2 | deSOx catalyst | $2,535/ton | 125 tpy | 2019 | |
| | | NOx | Currently RACT/BACT | N/A | N/A | N/A | |
| | Heaters & Boilers | PM | Currently RACT/BACT | N/A | N/A | N/A | |
| | | NOx | ULNB | $1,813 | 30 tpy | 2017 | |
| | SRU | SO2 | Redundant Scrubber | $11,474 | 50 tpy | 2019 | |
| **Chevron** | FCCU | PM | ESP | N/A | 113 tpy | 2014 | In place prior to analysis |
| | | SO2 | Feed hydrotreating/deSOx catalyst | N/A | 437.5 tpy | 2014 | In place prior to analysis |
| | | NOx | Feed hydrotreating/deSOx catalyst | N/A | 0 tpy | 2014 | In place prior to analysis |
| | Heaters & Boilers | NOx | Replace boilers 1, 2, 4 | $29,743 | 110 tpy | 2017 | |

# Point Source Reduction Summary

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | SRU | SO2 | Tail gas treatment unit | N/A | 0 tpy | 2014 | In place prior to analysis |
| | Flares | Combustion VOCs | Flare gas recovery | N/A | NOx= 86.1 tpy SO2=554.6 tpy | 2014 | System added in 2011 |
| | Wastewater | VOC | Regenerative Thermal Oxidizer | N/A | 0 tpy | 2014 | In place prior to analysis |
| **Holly** | FCCUs | PM | Wet gas scrubber (WGS) | N/A | 30 tpy | 2014 FCCU 1 2017 FCCU 2 | Draft AO requirement |
| | | SO2 | WGS | N/A | 260 tpy | 2014 FCCU 1 2017 FCCU 2 | Draft AO requirement |
| | | NOx | WGS | N/A | 26.2 tpy FCCU 1 | 2014 FCCU 1 2017 FCCU 2 | Draft AO requirement |
| | Heaters & Boilers | NOx | SCR | N/A | 35 tpy | 2017 | Draft AO requirement |
| | Compressors | Combustion emissions | Replacement w/ electric units | N/A | PM=1.6 tpy NOx=96.2 tpy SO2=0.04 tpy VOC=4 tpy | 2017 | Draft AO requirement |
| | SRU | SO2 | WGS | N/A | 125 tpy | 2017 | Draft AO requirement |
| **Tesoro** | FCCU | PM | Wet gas scrubber (WGS) | N/A | 0 tpy | 2019 | |
| | | SO2 | WGS | $27,700/ton | 585 tpy | 2019 | |
| | | NOx | WGS/LoTox | $153,000/ton | 106 tpy | 2019 | |
| | Heaters & boilers | NOx | ULNB | $10,900/ton | 17 tpy | 2017 | |
| | SRU | SO2 | Tail gas treatment unit | N/A | 0 tpy | 2014 | AO required |

# Point Source Reduction Summary

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **KUC – Smelter** | MAP CHP | NOx | Currently RACT/BACT | N/A | N/A | N/A | Low NOx burner |
| | | PM, SO2, VOC | Currently RACT/BACT | N/A | N/A | N/A | GCP, natural gas |
| | Calciner | NOx | Currently RACT/BACT | N/A | N/A | N/A | Low NOx burner |
| | Product drying, storage, packing | PM | Currently RACT/BACT | N/A | N/A | N/A | baghouse |
| | Refinery CHP | NOx | Currently RACT/BACT | N/A | N/A | N/A | Low NOx burner |
| | | SO2, PM, VOC | Currently RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |
| | Boiler | NOx | Currently RACT/BACT | N/A | N/A | N/A | Low NOx burner, FGR |
| | | SO2, PM, VOC | Currently RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |
| | Smelter stack | All | Currently RACT/BACT | N/A | N/A | N/A | MACT |
| | Powerhouse heater, boilers | NOx | Currently RACT/BACT | N/A | N/A | N/A | Low NOx burners, FGR |
| | | SO2, PM, VOC | Currently RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |
| | Feed storage building | PM | Currently RACT/BACT | N/A | N/A | N/A | Baghouse |
| | Smelter fugitives | SO2 | Currently RACT/BACT | N/A | N/A | N/A | MACT |

# Point Source Reduction Summary

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **KUC – Power** | Boilers 1-3 | NOx, SO2, PM | Replacement | N/A | N/A | N/A | Natural gas CHP |
| | Boiler 4 | NOx | LNB w/ OFA and SCR | $7,805/ton | 170 tpy | 2019 | |
| | | SO2, PM, VOC | Currently at RACT/BACT | N/A | N/A | N/A | GCP, natural gas from Nov 1 to Mar 1 |
| | Fugitives | PM | Currently RACT/BACT | N/A | N/A | N/A | |
| **KUC – BCM** | Haul Roads | PM | Currently at RACT | N/A | N/A | N/A | |
| | Haul trucks and mine equipment | NO2 | Higher tier engines | $50,000 - $70,000/ton | 64.7 tpy | 2019 | |
| **Nucor** | EAF | PM, SO2, NOx, VOC | Currently RACT/BACT | N/A | N/A | N/A | |
| | Reheat Furnaces | | Currently RACT/BACT | N/A | N/A | N/A | |
| | Caster Area Building | PM, VOC | Currently RACT/BACT | N/A | N/A | N/A | |
| **Vulcraft** | Painting | VOC | Currently RACT/BACT | N/A | N/A | N/A | Low VOC paint |
| **Proctor & Gamble** | Paper Machine | PM | Currently RACT/BACT | N/A | N/A | N/A | Venturi scrubber |
| | | NOx, VOC | Currently RACT/BACT | N/A | N/A | N/A | GCP |
| | Boilers | NOx | Currently RACT/BACT | N/A | N/A | N/A | Low Nox burner, FGR |
| | Converting Room | VOC | Currently RACT/BACT | N/A | N/A | N/A | Low VOC material |
| | | PM | Currently RACT/BACT | N/A | N/A | N/A | Drum filter |

# Point Source Reduction Summary

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Great Salt Lake Minerals** | Dryers | NOx | ULNB | Not Supplied | Nox=22.12 tpy | 2017 | |
| | Boilers | Nox | Currently RACT/BACT | N/A | N/A | N/A | ULNB w/flue gas recirculation |
| | | VOC | Currently RACT/BACT | N/A | N/A | N/A | GCP & natural gas |
| | Salt/SOP Production Lines | PM | 0.010 gr/dscf limit on all baghouses & scrubbers | $10,291/ton | PM=7.97 tpy | 2017 | |
| **ATK** | 71 MMBTU/hr Boilers | NOx | LNB, FGR | $8340/ton | 9.24 tpy | 2017 | |
| | | SO2, PM, VOC | Currently RACT/BACT | N/A | N/A | N/A | |
| | Solvent Operations | VOC | Currently RACT/BACT | N/A | N/A | N/A | Low vapor solvents, good work practices |
| | Static testing & open burning | Combustion emissions | Currently RACT/BACT | N/A | N/A | N/A | |
| **Hill Air Force Base** | Degreasing | VOC | Currently RACT/BACT | N/A | N/A | N/A | MACT |
| | External Combustion | NOx | Currently RACT/BACT | N/A | N/A | N/A | GCP |
| | Internal Combustion | NOx | Currently RACT/BACT | N/A | N/A | N/A | GCP |
| | | VOC | Currently RACT/BACT | N/A | N/A | N/A | GCP |

# Point Source Reduction Summary

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Fuel storage | VOC | Currently RACT/BACT | N/A | N/A | N/A | Submerged filling, vapor recovery, strict maintenance and operating control |
| | Jet engine testing | NOx<br>VOC | Currently RACT/BACT | N/A | N/A | N/A | |
| | Surface coating | VOC | Currently RACT/BACT | N/A | N/A | N/A | NESHAP GG, low VOC paint. HVLP spray guns |
| | Solvents | VOC | Currently RACT/BACT | N/A | N/A | N/A | MACT GG |
| **Wasatch Integrated Waste Management** | Municipal Waste Combustors | $NO_x$ | SNCR | $2,900/ton | 72 tpy | 2019 | |
| **Bountiful City Power** | Turbines | NOx | Currently RACT/BACT | N/A | N/A | N/A | GCP |
| | | VOC | Currently RACT/BACT | N/A | N/A | N/A | Oxidation catalyst on large turbines |
| | IC Engine | PM | Currently RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |
| | | VOC | Currently RACT/BACT | N/A | N/A | N/A | GCP |
| | | SO2 | Currently RACT/BACT | N/A | N/A | N/A | Natural gas |
| | | NOx | Currently RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |

# Point Source Reduction Summary

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **PacifiCorp Gabsby** | Natural gas boilers | NOx | Currently RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |
| | | VOC | Currently RACT/BACT | N/A | N/A | N/A | GCP |
| | | SO2, PM | Currently RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |
| | Natural gas turbines | NOx | Expand SCR catalyst beds | | 10.7 tpy | 2017 | |
| | | SO2, PM | Currently RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |
| | | VOC | Currently RACT/BACT | N/A | N/A | N/A | Oxidation catalyst |
| **Constellation Energy Resources** | Natural gas turbines | NOx | Currently RACT/BACT | N/A | N/A | N/A | SCR |
| | | VOC | Currently RACT/BACT | N/A | N/A | N/A | Oxidation catalyst |
| | | PM, SO2 | Currently RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |
| **University of Utah** | Lower Campus Heating Plant Units 3 & 4 | NOx | Boiler Replacement | $9,506/ton | 13.15 tpy | 2017 | LNB, FGR, OT, SCA |
| | | SO2, PM, VOC | Boiler Replacement | N/A | N/A | 2017 | Natural gas, GCP |
| | Upper Campus Heating Plant Units 1 & 3 | NOx | O2 trim Technology | $1357 ton | 12.08 tpy | 2015 | |
| | | SO2, PM, VOC | Currently RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |
| | Upper Campus Heating Plant Unit 4 | NOx, SO2, PM, VOC | Currently RACT/BACT | N/A | N/A | N/A | O2 trim Technology |

# Point Source Reduction Summary

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Hexcel** | Fiber Lines | PM | Currently RACT/BACT | N/A | N/A | N/A | GCP lines 2-8 and 10-12; Baghouse lines 13-14 |
| | | SO2 | Currently RACT/BACT | N/A | N/A | N/A | Natural gas |
| | | NOx | Currently RACT/BACT | N/A | N/A | N/A | GCP and natural gas lines 2-8 and 10-12; ULNB lines 13-14 |
| | | VOC | Currently RACT/BACT | N/A | N/A | N/A | GCP, flaring & incineration lines 2-8 and 10-12; RTO, incin. & flaring lines 13-14 |
| **Central Valley Water Reclamation** | Generators | NOx | Currently RACT/BACT | N/A | N/A | N/A | GCP |
| | | VOC | Currently RACT/BACT | N/A | N/A | N/A | GCP |
| | Digesters | VOC | Currently RACT/BACT | N/A | N/A | N/A | Two stage digester |
| | Composting | VOC | Currently RACT/BACT | N/A | N/A | N/A | In-vessel aerated static pile |
| **Olympia Sales** | Processing Mill, Door, and Sanding Areas | $PM_{10}$ $PM_{2.5}$ | Baghouse | \$1,900/ton PM10 \$3,410/ton PM2.5 | $PM_{10}$ = 7.5 tpy $PM_{2.5}$ = 4.4 tpy | 2014 | |

# Point Source Reduction Summary

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Chemical Lime** | Lime Processing Rotary Kiln | $PM_{10}$ $PM_{2.5}$ | Baghouse | $25,319/ton PM10 $91,642/ton PM2.5 | $PM_{10}$ = 39.36 tpy $PM_{2.5}$ = 10.87 tpy | 2019 | Or Upon Startup of Normal Operations |
| | Lime Processing Rotary Kiln | $NO_x$ | SNCR | $3,977/ton | 41 tpy | 2019 | Or Upon Startup of Normal Operations |
| **Payson City Power** | IC Engines | NOx, PM, SO2 | Currently at RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |
| | | VOC | oxidation catalyst | $51,165 | 1.4 tpy | 2017 | MACT Requirement |
| **Provo City Power** | IC Engines | NOx, PM, SO2 | Currently at RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |
| | | VOC | oxidation catalyst | $85,000/ton | 1.4 tpy | 2017 | MACT Requirement |
| **PacifiCorp Lake Side** | Combustion Turbines | NOx, PM, SO2 | Currently at RACT/BACT | N/A | N/A | N/A | LNB, SCR, Natural gas, GCP |
| | | VOC | Currently at RACT/BACT | N/A | N/A | N/A | oxidation catalysts |
| **Springville City Power** | IC Engines | NOx, PM, SO2 | Currently at RACT/BACT | N/A | N/A | N/A | Natural gas, GCP |
| | | VOC | oxidation catalyst | $921,000/ton | 0.1 tpy | 2017 | MACT Requirement |
| **Brigham Young University** | Boilers 4 & 6 | NOx | LNB and FGR | $14,923 | NOx=11.1 | 2017 | Cost efficiency is averaged between both boilers |

# Point Source Reduction Summary

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Geneva Nitrogen** | Ammonium Nitrate Plant | | Currently at RACT/BACT | N/A | N/A | N/A | SCR |
| | Annealing Oven | NOx | LNB & FGR | $13,947/ton | NOx=11.8 tpy | 2017 | |
| **Pacific States Cast Iron Pipe** | Cupola | NOx | Currently RACT/BACT | N/A | N/A | N/A | 33 lbs/hr |
| | | VOC | Currently RACT/BACT | N/A | N/A | N/A | afterburner |
| | Shotblast | PM | Currently RACT/BACT | N/A | N/A | N/A | baghouse |
| | Painting Ops | VOC | Thermal regenerative oxidation | $17,154/ton | VOC=129.1 tpy | 2019 | |
| | Desulfurization | PM | Currently RACT/BACT | N/A | N/A | N/A | baghouse |

H.11. General Requirements

a. The terms and conditions of this Subsection IX.H.11 shall apply to all sources subsequently addressed in Subsection IX.H.12 and 13. Should any inconsistencies exist between these two subsections, the source specific conditions listed in IX.H.12 and 13 shall take precedence.

b. The definitions contained in R307-101-2, Definitions, apply to Section IX, Part H.

c. Any information used to determine compliance shall be recorded for all periods when the plant is in operation, and such records shall be kept for a minimum of five years. Any or all of these records shall be made available to the Director upon request.

d. All emission limitations listed in Subsections IX.H.12 and IX.H.13 apply during steady-state operation, unless otherwise specified in the source specific conditions listed in IX.H.12 and 13.

e. Stack Testing:

   i. As applicable, stack testing to show compliance with the emission limitations for the sources in Subsection IX.H.12 and 13 shall be performed in accordance with the following:

      A. Sample Location: The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, or other EPA-approved methods as approved by the Director.

      B. Volumetric Flow Rate: 40 CFR 60, Appendix A, Method 2 or EPA Test Method No. 19 "$SO_2$ Removal & PM, $SO_2$, $NO_x$ Rates from Electric Utility Steam Generators" or other EPA-approved testing methods as directed by the Director.

      C. $PM_{10}$: For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201, 201a and 202, or other testing methods approved by the Director. All particulate captured shall be considered $PM_{10}$. The back half condensibles shall be used for compliance demonstration as well as for inventory purposes. For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5A, 5B, 5D,5E, 5F, or 5I as appropriate, or other EPA-approved testing methods as directed by the Director. The back half condensibles shall also be tested using the method specified by the Director. The portion of the front half of the catch considered $PM_{10}$ shall be based on information in Appendix B of the fifth edition of the EPA document, AP-42, or other data acceptable to the Director.

      D. $PM_{2.5}$: For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, 201a and 202, or other testing methods approved by the Director. All particulate captured shall be considered $PM_{2.5}$. The back half condensibles shall be used for compliance demonstration as well as for inventory purposes. For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5A, 5B, 5D,5E, 5F, or 5I as appropriate, or other EPA-approved testing methods as directed by the Director. The back half condensibles shall also be tested using the method specified by the Director. The portion of the front half of the catch considered $PM_{2.5}$ shall be based on information in Appendix B of the fifth edition of the EPA document, AP-42, or other data acceptable to the Director.

E. $SO_2$: 40 CFR 60 Appendix A, Method 6, 6A, 6B, 6C, or other EPA-approved testing methods as directed by the Director.
F. $NO_x$: 40 CFR 60 Appendix A, Method 7, 7A, 7B, 7C, 7D, 7E, or other EPA-approved testing methods as directed by the Director.
G. VOC: EPA-approved testing methods as directed by the Director.
H. Calculations: To determine mass emission rates (lb/hr, etc.) the pollutant concentration as determined by the appropriate methods above shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director, to give the results in the specified units of the emission limitation.
I. Notification of the test date shall be provided at least 30 days prior to the test. A pretest conference shall be held if directed by the Director. The emission point shall be designed to conform to the requirements of 40 CFR 60, Appendix A, Method 1, and Occupational Safety and Health Administration (OSHA) approvable access shall be provided to the test location. The production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

f. Continuous Emission and Opacity Monitoring
  i. For all continuous monitoring devices, the following shall apply:
    A. Except for system breakdown, repairs, calibration checks, and zero and span adjustments required under paragraph (d) 40 CFR 60.13, the owner/operator of an affected source shall continuously operate all required continuous monitoring systems and shall meet minimum frequency of operation requirements as outlined in R307-170 and 40 CFR 60.13.
    B. The monitoring system shall comply with all applicable sections of R307-170; 40 CFR 13; and 40 CFR 60, Appendix B – Performance Specifications.

g. Petroleum Refineries.
  i. Limits at Fluid Catalytic Cracking Units
    A. FCCU $SO_2$ Emissions
      I. By no later than January 1, 2018, each owner or operator of an FCCU shall comply with an $SO_2$ emission limit of 25 ppmvd @ 0% excess air on a 365-day rolling average basis and 50 ppmvd @ 0% excess air on a 7-day rolling average basis.
      II. Compliance with this limit shall be determined by following 40 C.F.R. §60.105a(g)
      III. $SO_2$ emissions during periods of Startup, Shutdown, or Malfunction shall not be used in determining compliance with the emission limit of 50 ppmvd @ 0% excess $O_2$ on a 7-day rolling average basis, provided that during such periods the owner or operator implements good air pollution control practices to minimize $SO_2$ emissions
    B. FCCU PM Emissions
      I. By no later than January 1, 2018, each owner or operator of an FCCU shall comply with an emission limit of 1.0 pounds PM per 1000 pounds coke burned on a 3-hour average basis.
      II. Compliance with this limit shall be determined by following the stack test protocol specified in 40 C.F.R. §60.106(b) to measure PM emissions on the FCCU. Each owner operator shall conduct stack tests once every five years at each FCCU.
      III. PM emissions during periods of Startup, Shutdown, or Malfunction shall not be used in determining compliance with the emission limit of 1.0 pounds of PM per 1000

pounds of coke burned on a 3-hour average basis, provided that during such periods the owner or operator implements good air pollution control practices to minimize PM emissions.

ii. Limits on Refinery Fuel Gas
   A. By no later than January 1, 2018, all petroleum refineries in or affecting the $PM_{2.5}$ nonattainment area shall reduce the $H_2S$ content of the refinery plant gas to 60 ppm or less as described in 40 CFR 60.102a, except during periods of startup, shutdown, or malfunction. Compliance shall be based on a rolling average of 365 days. The owner/operator shall comply with the fuel gas monitoring requirements of 40 CFR 60.107a and the related recordkeeping and reporting requirements of 40 CR 60.108a. As used herein, refinery "plant gas" shall have the meaning of "fuel gas" as defined in 40 CFR 60.101a, and may be used interchangeably.
   B. For natural gas, compliance is assumed while the fuel comes from a public utility.

iii. Limits on Heat Exchangers
   A. Each owner or operator shall comply with the requirements of 40 CFR 63.654 for heat exchange systems in volatile organic compound service as soon as practicable but no later than January 1, 2018. The owner or operator may elect to use another EPA-approved method other than the Modified El Paso Method if approved by the Director.
      I. The following applies in lieu of 40 CFR 63.654(b): A heat exchange system is exempt from the requirements in paragraphs 63.654(c) through (g) of this section if it meets any one of the criteria in the following paragraphs (i) through (ii) of this section.
         1. All heat exchangers that are in volatile organic compound service within the heat exchange system that either:
            a. Operate with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side; or
            b. Employ an intervening cooling fluid, containing less than 10 percent by weight of volatile organic compounds, between the process and the cooling water. This intervening fluid must serve to isolate the cooling water from the process fluid and must not be sent through a cooling tower or discharged. For purposes of this section, discharge does not include emptying for maintenance purposes.
         2. The heat exchange system cools process fluids that contain less than 10 percent by weight volatile organic compounds (i.e., the heat exchange system does not contain any heat exchangers that are in volatile organic compounds service).

iv. Leak Detection and Repair Requirements
   A. Each owner or operator shall comply with the requirements of 40 CFR 60.590a to 60.593a as soon as practicable but no later than January 1, 2018.

v. Requirements on Hydrocarbon Flares
   A. Beginning January 1, 2018, all hydrocarbon flares at petroleum refineries located in or affecting a designated $PM_{2.5}$ non-attainment area within the State shall be subject to the flaring requirements of NSPS Subpart Ja (40 CFR 60.100a–109a), if not already subject under the flare applicability provisions of Ja.

B. By no later than January 1, 2019, all petroleum refineries in or affecting a designated $PM_{2.5}$ non-attainment area within the State shall install and operate a flare gas recovery system designed to limit hydrocarbon flaring from each affected flare to levels below the values listed in 40 CFR 60.103a(c), except during periods of startup, shut down, or malfunction.

vi. Requirements on Tank Degassing

A. Beginning January 1, 2017, the owner or operator of any stationary tank of 40,000-gallon or greater capacity and containing or last containing any organic liquid, with a true vapor pressure equal or greater than 10.5 kPa (1.52 psia) at storage temperature (see R307-324-4(1)) shall not allow it to be opened to the atmosphere unless the emissions are controlled by exhausting VOCs contained in the tank vapor-space to a vapor control device until the organic vapor concentration is 10 percent or less of the lower explosion limit (LEL).

B. These degassing provisions shall not apply while connecting or disconnecting degassing equipment.

C. The Director shall be notified of the intent to degas any tank subject to the rule. Except in an emergency situation, initial notification shall be submitted at least three (3) days prior to degassing operations. The initial notification shall include:

I. Start date and time;

II. Tank owner, address, tank location, and applicable tank permit numbers;

III. Degassing operator’s name, contact person, telephone number;

IV. Tank capacity, volume of space degassed, and materials stored;

V. Description of vapor control device.

H.12 Source-Specific Emission Limitations in Salt Lake City – UT $PM_{2.5}$ Nonattainment Area

a. ATK Launch Systems Inc. – Promontory

i. During the period November 1 to February 28 annually, open burning reactive wastes with properties identified in 40 CFR 261.23 (a) (6) (7) (8) will be limited to 50 percent of the treatment facility's Department of Solid and Hazardous Waste permitted daily limit on days when the $PM_{2.5}$ levels exceed 35 ug/m3 at the nearest real-time monitoring station. During this period, records will be maintained identifying the quantity opened burned and the $PM_{2.5}$ level at the nearest real-time monitoring station on days when open burning occurs.

ii. During the period November 1 to February 28 annually, on days when the $PM_{2.5}$ levels exceed 35 ug/m3 at the nearest real-time monitoring station, the following shall not be tested:

A. Propellant, energetics, pyrotechnics, flares and other reactive compounds greater than 2,400 lbs. per day; or

B. Rocket motors less than 1,000,000 lbs. of propellant per motor subject to the following exception:

I. A single test of rocket motors less than 1,000,000 lbs. of propellant per motor is allowed on a day when the $PM_{2.5}$ levels exceed 35 ug/m3 at the nearest real-time monitoring station provided notice is given to the Director of the Utah Air Quality Division. No additional tests of rocket motors less than 1,000,000 lbs. of propellant may be conducted during the inversion period until the $PM_{2.5}$ levels have returned to a concentration below 35 ug/m3 at the nearest real-time monitoring station.

iii. During this period, records will be maintained identifying the size of the rocket motors tested and the $PM_{2.5}$ level at the nearest real-time monitoring station on days when open burning occur.

b. Big West Oil Refinery

i. Plantwide $PM_{2.5}$:
Following installation of the Flue Gas Blow Back Filter (FGF), Big West Oil's maximum filterable $PM_{2.5}$ emissions to the atmosphere shall not exceed 0.18 tons per day and 45 tons per rolling 12-month period for the entire refinery. By no later than January 1, 2019, Big West Oil shall conduct stack testing to establish the ratio of condensible $PM_{2.5}$ from the Catalyst Regeneration System. At that time the condensible fraction will be added and a new plant-wide limitation shall be established.

Filterable $PM_{2.5}$ emissions shall be determined daily by applying various emission factors to the relevant quantities of fuel combusted. Unless otherwise specified by an Approval Order issued to Big West Oil, the default emission factors to be used are as follows:

Natural gas – 1.9 lb/mmscf (filterable), 5.7 lb/mmscf (condensible)
Plant gas – 1.9 lb/mmscf (filterable), 5.7 lb/mmscf (condensible)

Daily gas consumption by all boilers and furnaces shall be measured by meters that can delineate the flow of gas to the indicated sources.

The equations used to determine emissions for the boilers and furnaces shall be as follows:

Emission Factor (lb/mmscf)*Gas Consumption (mmscf/24 hrs)/(2,000 lb/ton)

The daily filterable $PM_{2.5}$ emissions from the Catalyst Regeneration System shall be calculated using the following equation:

E = FR * EF

Where:
E = Emitted $PM_{2.5}$
FR = Feed Rate to Unit (kbbls/day)
EF = emission factor (lbs/kbbl), established by most recent stack test

Total 24-hour filterable $PM_{2.5}$ emissions shall be calculated by adding the results of the above filterable $PM_{2.5}$ equations for natural gas and plant gas combustion to the estimate for the Catalyst Regeneration System. Results shall be tabulated every day, and records shall be kept which include the meter readings (in the appropriate units) and the calculated emissions.

ii. Plantwide $NO_x$
Big West Oil's maximum $NO_x$ emissions to the atmosphere shall not exceed 0.80 tons per day and 195 tons per rolling 12-month period for the entire refinery.

$NO_x$ emissions shall be determined daily by applying various emission factors to the relevant quantities of fuel combusted. Unless otherwise specified by an Approval Order issued to Big West Oil, the default emission factors to be used are as follows:

Natural gas – latest version of AP-42 (currently see AP-42, Table 1.4-1)
Plant gas – assumed equal to natural gas (use values from AP-42, Table 1.4-1)

Since the emission factors are considered to be the same for either gas, this factor shall be applied to the metered quantity of blended gas. Should future information reveal that there is a difference in the emission factors for natural gas and plant gas, then the respective quantities shall be delineated.

Daily gas consumption by all boilers and furnaces shall be measured by meters that can delineate the flow of gas to the indicated sources.

The equations used to determine emissions for the boilers and furnaces shall be as follows:

Emission Factor (lb/mmscf)*Gas Consumption (mmscf/24 hrs)/(2,000 lb/ton)

The daily $NO_x$ emissions from the Catalyst Regeneration System shall be calculated using the following equation:

$NO_x$ = (Flue Gas, moles/hr) x (ADV ppm /1,000,000) x (30.006 lb/mole) x (operating hr/day)/(2000 lb/ton)

Where ADV = average daily value from $NO_x$ CEM

Total 24-hour $NO_x$ emissions shall be calculated by adding the results of the above $NO_x$ equations for natural gas and plant gas combustion to the estimate for the Catalyst Regeneration System. Results shall be tabulated every day, and records shall be kept which include the meter readings (in the appropriate units) and the calculated emissions.

iii. Plantwide $SO_2$
Big West Oil's maximum $SO_2$ emissions to the atmosphere shall not exceed 0.60 tons per day and 140 tons per rolling 12-month period for the entire refinery.

$SO_2$ emissions shall be determined daily by applying various emission factors to the relevant quantities of fuel combusted. These emission factors are:

Natural Gas - 0.60 lb $SO_2$/mmscf gas

Plant Gas - The emission factor to be used in conjunction with plant gas combustion shall be determined through the use of a continuous emissions monitor, which shall measure the $H_2S$ content of the fuel gas in ppmv. Daily emission factors shall be calculated using average daily $H_2S$ content data from the CEM. The emission factor shall be calculated as follows:

Emission Factor (lb $SO_2$/mmscf gas) = [(24 hr avg. ppmv $H_2S$)/10^6]*(64 lb $SO_2$/lb mole)*[(10^6 scf/mmscf)/(379 scf/lb mole)]

Daily natural gas consumption shall be measured by the two meters that supply the refinery.

Daily plant gas consumption shall be measured by whatever meters are necessary to measure the flow of plant gas throughout the plant.

The equations used to determine emissions for the boilers and furnaces shall be as follows:

Emission Factor (lb/mmscf)*Natural Gas Consumption (mmscf/24 hrs)/(2,000 lb/ton)

Emission Factor (lb/mmscf)*Plant Gas Consumption (mmscf/24 hrs)/(2,000 lb/ton)

The daily $SO_2$ emission from the Catalyst Regeneration System shall be calculated using the following equation:

$SO_2$ = FG * (ADV/1,000,000) * (64 lb/mole) * (operating hours/day) / (2000 lb/ton)

Where:
FG = Flue Gas in moles/hour
ADV = average daily value from $SO_2$ CEM

Total 24-hour $SO_2$ emissions shall be calculated by adding the daily results of the above $SO_2$ emissions equations for natural gas and plant gas combustion to the estimate for the Catalyst Regeneration System. Results shall be tabulated every day, and records shall be kept which include the CEM readings for $H_2S$ (averaged for each day), all meter readings (in the appropriate units), and the calculated emissions.

c. Bountiful City Light and Power: Power Plant

i. Emissions to the atmosphere shall not exceed the following rates and concentrations:

A. GT #1 (5.3 MW Turbine) Exhaust Stack:
$NO_x$ 0.6 g/kW-hr

B. GT #2 and GT #3 (each TITAN Turbine) Exhaust Stack:
$NO_x$ 15 ppm

ii. Compliance to the above emission limitations shall be determined by stack test as outlined in Section IX Part H.11.e of this SIP.

d. CER Generation II, LLC (Exelon Generation): West Valley Power Plant

i. Emissions of $NO_x$ from each individual turbine shall be no greater than 5 ppmdv (15% $O_2$, dry) based on a 30-day rolling average.

ii. Total emissions of $NO_x$ from all five turbines shall be no greater than 37 lbs/hour (15% $O_2$, dry) based on a 30-day rolling average.

iii. The $NO_x$ emission rate (lb/hr) shall be calculated by multiplying the $NO_x$ concentration (ppmdv) generated from CEMs and the volumetric flow rate. The daily average of $NO_x$ emission rate (lb/hr) shall be calculated for each turbine and the daily total emissions shall be calculated by adding data from five turbines once for each day. The 30-day rolling average shall be calculated by adding previous 30 days data on a daily basis.

e. Central Valley Water Reclamation Facility: Wastewater Treatment Plant

i. $NO_x$ emissions from the operation of all engines at the plant shall not exceed 0.648 tons per day.

   Compliance with the daily mass emission limits shall be demonstrated by multiplying emission factors (in units of mass per kw-hr) determined for each engine by the most recent stack test results, by the respective kilowatt hours generated each day. Power production shall be determined by examination of electrical meters which shall record the electricity production. Continuous recording is required. The records shall be kept on a daily basis.

   $NO_x$ emission from the operation of all engines at the plant shall not exceed 205.6 tons per year.

   Stack testing to determine the emission factors necessary to show compliance with the emission limitations stated in this condition shall be performed at least once every five (5) years.

ii. Emissions to the atmosphere from each of the 1150 kw engine generators shall not exceed the following rates and concentrations:

| Pollutant | lb/hr | gm/(hp-hr) |
|---|---|---|
| $NO_x$ | 5.95 | 1.75 |

iii. Emissions to the atmosphere from each of the 1340 kw engine generators shall not exceed the following rates and concentrations:

| Pollutant | lb/hr | gm/(hp-hr) |
|---|---|---|
| $NO_x$ | 7.13 | 1.8 |

iv. Compliance to the above emission limits shall be determined by stack test as outlined in Section IX Part H.11.e of this SIP.

f. Chemical Lime Company (LHoist North America)

i. Lime Production Kiln:

A. Upon plant start-up SNCR technology shall be installed on the Lime Production Kiln for reduction of $NO_x$ emission.

B. Upon plant start-up a baghouse control technology shall be installed and operating on the Lime Production Kiln for reduction of PM emission.

I. Lime Production Kiln Baghouse:

1. PM emissions shall not exceed 0.12 pounds per ton (lb/ton) of stone feed

II. Compliance to the above emission limit shall be determined by stack testing as outlined in Section IX Part H.11.e of this SIP and in accordance with 40 CFR 63 Subpart AAAAA.

C. An initial compliance test is required within 180 days of plant start-up.

D. Subsequent to initial compliance testing, stack testing is required at a minimum of every five years.

g. Chevron Products Company - Salt Lake Refinery

i. Plantwide $PM_{2.5}$

Combined emissions of filterable $PM_{2.5}$ shall not exceed 0.18 tons per day (tpd) and 65 tons per rolling 12-month period.

Compliance with the daily $PM_{2.5}$ limit shall be determined daily by multiplying the quantity of each fuel burned at the affected units by the associated emission factor for that fuel, and summing the results.

Filterable $PM_{2.5}$ emissions shall be determined daily by applying various emission factors to the relevant quantities of fuel combusted. Unless otherwise specified by an Approval Order issued to Chevron, the default emission factors to be used are as follows:

Natural gas – 1.9 lb/mmscf (filterable), 5.7 lb/mmscf (condensible)
Plant gas – 1.9 lb/mmscf (filterable), 5.7 lb/mmscf (condensible)

Fuel Oil/ HF alkylation polymer: The filterable $PM_{2.5}$ emission factor shall be determined based on the sulfur content of the fuel (S) according to the equation:

EF (lb/1000 gal) = (Wt. % S * 10) + 3.22

The condensible $PM_{2.5}$ emission factor for fuel oil combustion shall be determined from the latest edition of AP-42.

Daily gas consumption by all boilers and furnaces shall be measured by meters that can delineate the flow of gas to the indicated sources.

Daily fuel oil consumption shall be monitored with tank gages. Fuel oil consumption shall be allowed only during periods of natural gas curtailment.

The filterable $PM_{2.5}$ emission factor for the FCC Catalyst Regenerator shall be determined based on the results of the most recent stack test.

By no later than January 1, 2017, Chevron shall conduct stack testing to establish the ratio of condensible $PM_{2.5}$ from the FCC Catalyst Regenerator and SRUs. At that time the condensible fraction will be added and a new plant-wide limitation shall be established.

ii. Plantwide $NO_x$

Combined emissions of $NO_x$ shall not exceed 2.1 tons per day (tpd) and 766.5 tons per rolling 12-month period.

Compliance with the daily limit shall be determined daily by multiplying the quantity of each fuel burned at each affected unit by the associated emission factor for that fuel at that unit, and summing the results.

Chevron shall maintain a record of fuel meter identifiers and locations, conversion factors, and other information required to demonstrate the required calculations. Records shall be kept showing the daily fuel usage, fuel meter readings, required fuel properties, hours of equipment operation, and calculated daily emissions.

The emission factors to be used for the above limitations are as follows:

Natural Gas/Plant Gas: by individual furnace/boiler*

*the most recent listing of these emission factors is maintained in Chevron's AO.

FCC Regenerator: The emission rate shall be determined by the FCC Regenerator $NO_x$ CEM

All other emission units shall be stack-tested if directed by the Director. Chevron may also perform a stack test to provide information for updating the emission factors.

iii. Plantwide $SO_2$
Combined emissions of $SO_2$ shall not exceed 1.05 tons per day (tpd) and 383.3 tons per rolling 12-month period.

Daily $SO_2$ emissions from affected units shall be determined by multiplying the quantity of each fuel used daily (24 hr usage) at each affected unit by the appropriate emission factor below. The values shall be summed to show the total daily sulfur dioxide emission.

Emission factors (EF) for the various fuels and emission sources shall be as follows:

FCC Regenerator: The emission rate shall be determined by the FCC Regenerator $SO_2$ CEM

SRUs: The emission rate shall be determined by multiplying the sulfur dioxide concentration in the flue gas by the mass flow of the flue gas. The sulfur dioxide concentration in the flue gas shall be determined by CEM.

Natural gas: EF = 0.60 lb/MMscf

Fuel oil & HF Alkylation polymer: The emission factor to be used for combustion shall be calculated based on the weight percent of sulfur, as determined by ASTM Method D-4294-89 or EPA-approved equivalent, and the density of the fuel oil, as follows:

EF (lb $SO_2$/k gal) = density (lb/gal) * (1000 gal/k gal) * wt.% S/100 * (64 lb $SO_2$/32 lb S)

Plant gas: the emission factor shall be calculated from the $H_2S$ measurement obtained from the $H_2S$ CEM. The emission factor shall be calculated as follows:

EF (lb $SO_2$/MMscf gas) = (24 hr avg. ppmdv $H_2S$) /10^6 * (64 lb $SO_2$/lb mole) * (10^6 scf/MMscf)/(379 scf/lb mole)

Chevron shall maintain a record of fuel meter identifiers and locations, conversion factors, and other information required to demonstrate the required calculations. Records shall be kept showing the daily fuel usage, fuel meter readings, required fuel properties, hours of equipment operation, and calculated daily emissions.

h. Great Salt Lake Minerals Corporation: Production Plant

i. $PM_{10}$ emissions to the atmosphere from the indicated emission point shall not exceed the following rates and concentrations:

| Source | Concentration (grains/dscf) (@ 68 degrees F 29.92 in Hg) |
|---|---|
| SOP Plant Compaction/Loadout | 0.010 |
| Salt Plant Screening | 0.010 |
| SOP Plant Dryer D-001 | 0.010 |
| SOP Plant Dryer D-002 | 0.010 |
| SOP Plant Dryer D-003 | 0.010 |
| SOP Plant Dryer D-004 | 0.010 |
| SOP Plant Drying Circuit Fluid Bed Heater D-005 | 0.010 |
| Salt Plant Dryer D-501 | 0.010 |
| SOP Loadout | 0.010 |
| SOP Silo Dust Collection | 0.010 |
| SOP Plant Compaction | 0.010 |
| Salt Plant Dust Collection | 0.010 |
| Bulk Truck Salt Loadout | 0.0053 |
| Mag Chloride Plant | 0.010 |

ii. $NO_x$ emissions to the atmosphere from the indicated emission point shall not exceed the following rates and concentrations:

| Source | Concentration (ppm) |
|---|---|
| Boiler #1 | 9.0 |
| Boiler #2 | 9.0 |

iii. Compliance to the above emission limits shall be determined by stack test as outlined in Section IX Part H.11.e of this SIP.

iv. Stack tests shall be performed as soon as possible and in no case later than January 1, 2017.

v. Subsequent to initial compliance testing, stack testing is required at a minimum of every five years.

vi. By January 1, 2017, at a minimum, ultra-low $NO_x$ burner technology shall be in operation on all dryers.

i. Hexcel Corporation: Salt Lake Operations

i. The following limits shall not be exceeded for Fiber Lines 2-8, 10-16, the Pilot Plant, and Matrix Operations:

A. 4.42 MMscf of natural gas consumed per day.

B. 0.061 MM pounds of carbon fiber produced per day.

C. Compliance with each limit shall be determined by the following methods:

I. Natural gas consumption shall be determined by examination of natural gas billing records for the plant.

II. Fiber production shall be determined by examination of plant production records.

III. Records of consumption and production shall be kept on a daily basis for all periods then the plant is in operation.

j. Hill Air Force Base: Main Base

   i. VOC emissions from painting and depainting operations shall not exceed 0.58 tons per day.

   ii. Compliance with this limit shall be determined daily by a rolling monthly average.

k. Holly Corporation: Holly Refining & Marketing Company (Holly Refinery)

i. Plantwide $PM_{2.5}$

$PM_{2.5}$ emissions (filterable + condensible) from all combustion sources shall not exceed 47.6 tons per rolling 12-month period or 0.134 tons per day (tpd).

$PM_{2.5}$ emissions shall be determined daily by applying various emission factors or emission factors determined from the most current performance testing to the relevant quantities of fuel combusted. Unless otherwise specified by an Approval Order issued to Holly, the default emission factors to be used are as follows:

Natural gas or Plant gas for all non-NSPS combustion equipment: 7.65 lb $PM_{2.5}$/mmscf
Natural gas or Plant gas for all NSPS combustion equipment: 0.52 lb $PM_{2.5}$/mmscf

Fuel oil: The filterable $PM_{2.5}$ emission factor for fuel oil combustion shall be determined based on the sulfur content of the oil as follows:

$PM_{2.5}$ (lb/kgal) = (10 * wt. % S) + 3

The condensible $PM_{2.5}$ emission factor for fuel oil combustion shall be determined from the latest edition of AP-42.

Daily natural gas and plant gas consumption shall be determined through the use of flow meters.

Daily fuel oil consumption shall be monitored by means of leveling gages on all tanks that supply fuel oil to combustion sources. Fuel oil consumption shall be allowed only during periods of natural gas curtailment.

The equations used to determine emissions for the boilers and furnaces shall be as follows:

Emissions (tons/day) = Emission Factor (lb/MMscf) * Natural/Plant Gas Consumption (MMscf/day)/(2,000 lb/ton)

Emissions (tons/day) = Emission Factor (lb/kgal) * Fuel Oil Consumption (kgal/day)/(2,000 lb/ton)

Total 24-hour $PM_{2.5}$ emissions for the sources shall be calculated by adding the daily results of the above $PM_{10}$ emissions equations for natural gas, plant gas, and fuel oil combustion. Results shall be tabulated for every day, and records shall be kept which include all meter readings (in the appropriate units), fuel oil parameters (wt. %S), and the calculated emissions.

ii. Plantwide $NO_x$

$NO_x$ emissions into the atmosphere from all sources shall not exceed 347.1 tons per rolling 12-month period or 2.09 tons per day (tpd).

$NO_x$ emissions shall be determined by applying the following emission factors or emission factors determined from the most current performance testing to the relevant quantities of fuel combusted.

Natural gas/refinery fuel gas combustion using Low $NO_x$ burners (LNB): 41 lbs/MMscf
Natural gas/refinery fuel gas combusted using Ultra-Low $NO_x$ burners: 0.04 lbs/MMbtu
Natural gas/refinery fuel gas combusted using Next Generation Ultra Low $NO_x$ burners: 0.10 lbs/MMbtu
Natural gas/refinery fuel gas combusted burners using selective catalytic reduction (SCR): 0.02
lbs/MMbtu
All other natural gas/refinery fuel gas combustion burners: 100 lb/MMscf
All fuel oil combustion: 120 lbs/Kgal

Where:
"Natural gas/refinery fuel gas" shall represent any combustion of natural gas, refinery fuel gas, or combination of the two in the associated burner.

Daily natural gas and plant gas consumption shall be determined through the use of flow meters.

Daily fuel oil consumption shall be monitored by means of leveling gauges on all tanks that supply combustion sources. Fuel oil consumption shall be allowed only during periods of natural gas curtailment.

The equations used to determine emissions for the boilers and furnaces shall be as follows:

Emissions (tons/day) = Emission Factor (lb/MMscf) * Natural Gas Consumption (MMscf/day)/(2,000 lb/ton)

Emissions (tons/day) = Emission Factor (lb/MMscf) * Plant Gas Consumption (MMscf/day)/(2,000 lb/ton)

Emissions (tons/day) = Emission Factor (lb/MMBTU) * Burner Heat Rating (BTU/hr) * 24 hours per day /(2,000 lb/ton)

Emissions (tons/day) = Emission Factor (lb/kgal) * Fuel Oil Consumption (kgal/day)/(2,000 lb/ton)

Total 24-hour $NO_x$ emissions for sources shall be calculated by adding the results of the above $NO_x$ equations for plant gas, fuel oil, and natural gas combustion. Results shall be tabulated for every day; and records shall be kept which include the meter readings (in the appropriate units), emission factors, and the calculated emissions.

iii. Plantwide $SO_2$

The emission of $SO_2$ into the atmosphere from all sources (excluding routine turnaround maintenance emissions) shall not exceed 110.3 tons per rolling 12-month period or 0.31 tons per day (tpd).

The routine turnaround maintenance period (maximum of every 3 years for a maximum of a 15 day period) for the SRU (Unit 17) shall only be scheduled during the period of April 1 through October 31. The projected SRU turnaround period shall be submitted to the Director by April 1 of each year in which a turnaround is planned. Notice shall also be provided to the Director 30 days prior to the planned turnaround.

$SO_2$ emissions into the atmosphere shall be determined by applying the following emission factors or emission factors determined from the most current performance testing to the relevant quantities of fuel burned. $SO_2$ emission factors for the various fuels shall be as follows:

Natural gas - 0.60 lb $SO_2$/MMscf

Plant gas - The emission factor to be used in conjunction with plant gas combustion shall be determined through the use of a CEM which will measure the $H_2S$ content of the fuel gas in parts per million by volume (ppmv). Daily emission factors shall be calculated using average daily $H_2S$ content data from the CEM.  The emission factor shall be calculated as follows:

(lb $SO_2$/MMscf gas) = (24 hr avg. ppmv $H_2S$)/10^6 * (64 lb $SO_2$/lb mole) * (10^6 scf/MMscf)/(379 scf / lb mole)

Fuel oil - The emission factor to be used in conjunction with fuel oil combustion (during natural gas curtailments) shall be calculated based on the weight percent of sulfur, as determined by ASTM Method 0-4294-89 or EPA-approved equivalent, and the density of the fuel oil, as follows:

(lb of $SO_2$/kgal) = (density lb/gal) * (1000 gal/kgal) * (wt. %S)/100 * (64 g $SO_2$/32 g S)

The weight percent sulfur and the fuel oil density shall be recorded for each day any fuel oil is combusted.  Fuel oil may be combusted only during periods of natural gas curtailment. The sulfur content of the fuel oil shall be tested if directed by the Director.

Fuel Consumption shall be measured as follows:

Natural gas and plant gas consumption shall be determined through the use of flow meters.

Fuel oil consumption shall be measured each day by means of leveling gauges on all tanks that supply oil to combustion sources.

The equations used to determine emissions shall be as follows:

Emissions (tons/day) = Emission Factor (lb/MMscf) * Natural Gas Consumption (MMscf/day)/(2,000 lb/ton)

Emissions (tons/day) = Emission Factor (lb/MMscf) * Plant Gas Consumption (MMscf/day)/(2,000 lb/ton)

Emissions (tons/day) = Emission Factor (lb/kgal) * Fuel Oil Consumption (kgal/24 hrs)/(2,000 lb/ton)

Total daily $SO_2$ emissions shall be calculated by adding daily results of the above $SO_2$ emissions equations for natural gas, plant gas, and fuel oil combustion. Results shall be tabulated for every day; and records shall be kept which include the CEM readings for $H_2S$ (averaged for each one-hour period), all meter readings (in the appropriate units), fuel oil parameters (density and wt. %S, recorded for each day any fuel oil is burned), and the calculated emissions.

l. Kennecott Utah Copper (KUC): Mine

i. Bingham Canyon Mine (BCM)

A. Maximum total mileage per calendar day for ore and waste haul trucks shall not exceed 30,000 miles.

B. The following site-wide emission limits at the BCM shall not be exceeded:

I. 6,205 tons of $NO_X$, $PM_{2.5}$ and $SO_2$ combined per rolling 12-month period until January 1, 2019.

II. After January 1, 2019, combined emissions of $NO_X$, $PM_{2.5}$, and $SO_2$ shall not exceed 5,585 tons per rolling 12 month period.

Compliance with the 12-month period limits shall be determined on a rolling 12-month total based on the previous 12 months per methodology outlined in Emissions Inventory. KUC shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. [R307-401-8]

C. To minimize fugitive dust on roads at the mine, the owner/operator shall perform the following measures:

I. Apply water to all active haul roads as conditions warrant, and shall

1. ensure the surface of the active haul roads located within the pit influence boundary consists of road base material, blasted waste rock, crushed rock, or chemical dust suppressant, and

2. apply a chemical dust suppressant to active haul roads located outside of the pit influence boundary no less than twice per year.

II. Ore conveyors shall be the primary means for transport of crushed ore from the mine to the concentrator.

III. Chemical dust suppressant shall be applied as conditions warrant on unpaved access roads that receive haul truck traffic and light vehicle traffic.

IV. Graders shall be used to perform haul road maintenance and clean-up activities as well as other operational functions.

m. Kennecott Utah Copper: Power Plant

i. UTAH POWER PLANT

A. Units #1, #2, and #3 (boilers #1, #2, and #3) shall not be operated after January 1, 2018, or upon commencing operations of Unit #5 (combined-cycle, natural gas-fired combustion turbine), whichever is sooner.

B. Unit #5 shall not exceed the following emission rates to the atmosphere:

| | POLLUTANT | lb/hr | ppmdv (15% O2 dry) |
|---|---|---|---|
| I. | $NO_x$: | | 2.0* |
| II. | VOC: | | 2.0* |
| III. | $PM_{2.5}$ with duct firing: | | |
| | Filterable + condensable | 18.8 | |

* Under steady state operation.

C. Stack testing to show compliance with the above Unit #5 emission limitations shall be performed as follows:

| | POLLUTANT | TEST FREQUENCY |
|---|---|---|
| I. | $PM_{2.5}$ | 3 years |
| II. | $NO_x$ | 3 years |
| III. | VOC | 3 years |

The heat input during all compliance testing shall be no less than 90% of the design rate. The limited use of natural gas during startup, for maintenance firings and break-in firings does not constitute operation and does not require stack testing.

D. The following requirements are applicable to Unit #4 during the period November 1 to February 28/29 inclusive:

I. During the period from November 1, to the last day in February, inclusive, natural gas shall only be used as a fuel, unless the supplier or transporter of natural gas imposes a curtailment. The power plant may then burn coal, only for the duration of the curtailment plus sufficient time to empty the coal bins following the curtailment.

II. Except during a curtailment of natural gas supply, emissions to the atmosphere from the indicated emission point shall not exceed the following rates:

| POLLUTANT | grains/dscf 68oF, 29.92 in Hg | ppmdv (3% O2) |
|---|---|---|
| 1. Before January 1, 2018 | | |
| a. $PM_{2.5}$ | | |
| filterable | 0.004 | |
| filterable + condensable | 0.03 | |
| b. $NO_x$: | | 336 |
| 2. After January 1, 2018 | | |
| a. $PM_{2.5}$ | | |
| filterable | 0.004 | |
| filterable + condensable | 0.03 | |
| b. $NO_x$: | | 60 |

III. When using coal during a curtailment of natural gas supply, emissions to the atmosphere from the indicated emission point shall not exceed the following rates and concentrations:

| POLLUTANT | grains/dscf 68oF, 29.92 in Hg | lb/hr | ppmdv (3% $O_2$) |
|---|---|---|---|
| 1. $PM_{2.5}$ | | | |
| filterable | 0.029 | 33.5 | |
| filterable + condensable | 0.29 | 382 | |
| 2. $NO_x$ | | | 384 |

IV. Stack testing to show compliance with the above emission limitations shall be performed as follows for the following air contaminants:

| POLLUTANT | TEST FREQUENCY |
|---|---|
| 1. $PM_{2.5}$ | every year |

2. $NO_x$ every year

The heat input during all compliance testing shall be no less than 90% of the design rate.

The limited use of natural gas during startup, for maintenance firings and break-in firings does not constitute operation and does not require stack testing.

ii. BONNEVILLE BORROW AREA PLANT

A. Maximum total mileage per calendar day for haul trucks shall not exceed 12,500 miles.

n. Kennecott Utah Copper: Smelter and Refinery

i. SMELTER:

A. Emissions to the atmosphere from the indicated emission points shall not exceed the following rates and concentrations:

I. Main Stack (Stack No. 11)

1. $PM_{2.5}$
   a. 85 lbs/hr (filterable)
   b. 434 lbs/hr (filterable + condensable)

2. $SO_2$
   a. 552 lbs/hr (3 hr. average – rolling)
   b. 422 lbs/hr (24 hr. average - calendar day)

3. $NO_x$ 35 lbs/hr (annual average)

II. Acid Plant Tail Gas

1. $SO_2$
   a. 1,050 ppmdv (3 hr. rolling average)
   b. 650 ppmdv (6 hr. rolling average)

III. Holman Boiler

1. $NO_x$
   a. 9.34 lbs/hr, 30-day average
   b. 0.05 lb/million BTU, 30-day average

B. Stack testing to show compliance with the emissions limitations of Condition (a) above shall be performed as specified below:

| EMISSION POINT | POLLUTANT | TEST FREQUENCY |
|---|---|---|
| I. Main Stack (Stack No. 11) | | |
| | $PM_{2.5}$ | every year |
| | $SO_2$ | CEM |
| | $NO_x$ | CEM |
| II. Acid Plant Tailgas | $SO_2$ | CEM |

| | | |
|---|---|---|
| III. Holman Boiler | $NO_x$ | CEM or alternate method determined according to applicable NSPS standards |

ii. REFINERY:

A. Emissions to the atmosphere from the indicated emission point shall not exceed the following rate:

| EMISSION POINT | POLLUTANT | MAXIMUM EMISSION RATE |
|---|---|---|
| The sum of Two (Tankhouse) Boilers | $NO_x$ | 9.5 lbs/hr |
| Combined Heat Plant Turbine | $NO_x$ | 5.96 lbs/hr |

B. Stack testing to show compliance with the above emission limitations shall be performed as follows:

| EMISSION POINT | POLLUTANT | TESTING FREQUENCY |
|---|---|---|
| Boilers | $NO_x$ | every three years |
| Combined Heat Power Plant | $NO_x$ | every year |

To determine mass emission rate, the pollutant concentration as determined by the appropriate methods above, shall be multiplied by the volumetric flow rate and any necessary conversion factors to give the results in the specified units of the emission limitation. Provided that the two boilers installed are identical in make, model, and pollution control equipment, compliance with the emission limitation by the second boiler shall be determined by the stack test of the first boiler.

C. The owner/operator shall use only natural gas or landfill gas as a primary fuel in the boilers. The boilers may be equipped to operate on #2 fuel oil; however, operation of the boilers on #2 fuel oil shall only occur during periods of natural gas curtailment and during testing and maintenance periods. Operation of the boilers on #2 fuel oil shall be reported to the Director within one working day of start-up. Emissions resulting from operation of the boiler on #2 fuel oil shall be reported to the Director within 30 days following the use of #2 fuel oil in the boilers.

iii. MAP:

A. Emissions to the atmosphere from the Natural Gas Turbine combined with Duct Burner and with TEG Firing shall not exceed the following rate:

| EMISSION POINT | POLLUTANT | MAXIMUM EMISSION RATE |
|---|---|---|
| Combined Heat Power Plant | $NO_x$ | 5.01 lbs/hr |

B. Stack testing to show compliance with the above emission limitations shall be performed as follows:

| EMISSION POINT | POLLUTANT | TESTING FREQUENCY |
|---|---|---|
| Combined Heat Plant | $NO_x$ | every year |

To determine mass emission rates (lbs/hr, etc.), the pollutant concentration as determined by the appropriate methods above, shall be multiplied by the volumetric flow rate and any necessary conversion factors determined by the Director to give the results in the specified units of the emission limitation.

o. Nucor Steel Mills

i. Emissions to the atmosphere from the indicated emission points shall not exceed the following rates and concentrations:

A. Electric Arc Furnace Baghouse

I. $PM_{2.5}$
1. 19.53 lbs/hr (24 hr. average filterable)
2. 29.53 lbs/hr (filterable + condensable)

II. $SO_2$
1. 93.98 lbs/hr (3 hr. average – rolling)
2. 89.0 lbs/hr (24 hr. average - calendar day)

III. $NO_x$ 59.75 lbs/hr (annual average)

IV. VOC 22.20 lbs/hr

B. Reheat Furnace #1

$NO_x$ 15.0 lb/hr

C. Reheat Furnace #2

$NO_x$ 8.0 lb/hr

All annual average emissions limits shall be based on rolling 12-month averages.

ii. Stack testing to show compliance with the emissions limitations of Condition (i) above shall be performed as specified below:

| SOURCE | POLLUTANT | TEST FREQUENCY |
|---|---|---|
| A. Electric Arc Furnace Baghouse | $PM_{2.5}$ | every year |
| | $SO_2$ | CEM |
| | $NO_X$ | CEM |
| | VOC | every 5 years |
| B. Reheat Furnace #1 | $NO_x$ | every 3 years |
| C. Reheat Furnace #2 | $NO_x$ | every 3 years |

iii. Testing Status (To be applied to (i) and (ii) above)

A. To demonstrate compliance with the main stack mass emissions limits for $SO_2$ and $NO_x$ of Condition (i)(A) above, Nucor shall calibrate, maintain and operate the measurement systems for continuously monitoring for $SO_2$ and $NO_x$ concentrations and stack gas volumetric flow rates in the Electric Arc Furnace stack. Such measurement systems shall meet the requirements of R307¬170.

B. For $PM_{2.5}$ testing, 40 CFR 60, Appendix A, Method 5D may be used to determine total TSP emissions. If TSP emissions are below the $PM_{2.5}$ limit, that will constitute compliance with the $PM_{2.5}$ limit. If TSP emissions are not below the $PM_{2.5}$ limit, the owner/operator shall retest using the methods specified for $PM_{2.5}$ testing within 120 days.

p. Olympia Sales Company: Cabinet Manufacturing Facility

i. By January 1, 2015, a baghouse control device shall be installed and operating for control of the process exhaust streams from the mill, door, and sanding areas.

q. PacifiCorp Energy: Gadsby Power Plant

i. Steam Generating Unit #1:

A. Emissions of $NO_x$ shall be no greater than 336 ppmdv (3% $O_2$, dry).

B. The permittee should install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of $NO_x$ and $O_2$ monitors to determine compliance with the $NO_x$ limitation.

ii. Steam Generating Unit #2:

A. Emissions of $NO_x$ shall be no greater than 336 ppmdv (3% $O_2$, dry).

B. The permittee should install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of $NO_x$ and $O_2$ monitors to determine compliance with the $NO_x$ limitation.

iii. Steam Generating Unit #3:

A. Emissions of $NO_x$ shall be no greater than 336 ppmdv (3% $O_2$, dry).

B. The permittee should install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of $NO_x$ and $O_2$ monitors to determine compliance with the $NO_x$ limitation.

iv. Natural Gas-fired Simple Cycle Turbine Units:

A. Total emissions of $NO_x$ from all three turbines shall be no greater than 22.2 lbs/hour (15% $O_2$, dry) based on a 30-day rolling average.

B. Emission of $NO_x$ from each individual turbine shall be no greater than 5 ppmdv (15% $O_2$, dry) based on 30 day rolling average.

C. The permittee should install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of $NO_x$ and $O_2$ monitors to determine compliance with the applicable $NO_x$ limitations.  The $NO_x$ emission rate (lb/hr) shall be calculated by multiplying the $NO_x$ concentration (ppmdv) generated from CEMs and the volumetric flow rate.

r. Tesoro Refining and Marketing Company: Salt Lake City Refinery

i. Plantwide $PM_{2.5}$

Tesoro's maximum filterable $PM_{2.5}$ emissions to the atmosphere shall not exceed 0.42 tons per day and 110 tons per rolling 12-month period for the entire refinery.

Filterable $PM_{2.5}$ emissions shall be determined daily by applying various emission factors to the relevant quantities of fuel combusted. Unless otherwise specified by an Approval Order issued to Tesoro, the default emission factors to be used are as follows:

Natural gas – 1.9 lb/mmscf (filterable), 5.7 lb/mmscf (condensible)
Plant gas – 1.9 lb/mmscf (filterable), 5.7 lb/mmscf (condensible)

Daily gas consumption by all boilers and furnaces shall be measured by meters that can delineate the flow of gas to the indicated sources.

The equations used to determine emissions for the boilers and furnaces shall be as follows:

Emission Factor (lb/mmscf) * Gas Consumption (mmscf/24 hrs)/(2,000 lb/ton)

By no later than January 1, 2019, Tesoro shall conduct stack testing to establish the ratio of condensible $PM_{2.5}$ from the FCCU wet gas scrubber stack and SRU/TGTU/TGI. At that time the condensible fraction will be added and a new plant-wide limitation shall be established.

Total 24-hour $PM_{2.5}$ (filterable + condensible) emissions shall be calculated by adding the results of the above filterable $PM_{2.5}$ equations for natural gas and plant gas combustion to the values for the FCCU wet gas scrubber stack and SRU/TGTU/TGI. Results shall be tabulated every day, and records shall be kept which include the meter readings (in the appropriate units) and the calculated emissions.

ii. Plantwide $NO_x$

Combined emissions of $NO_x$ shall not exceed 0.82 tons per day (tpd) and 300 tons per rolling 12-month period.

Compliance shall be determined daily by multiplying the hours of operation of a unit, feed rate to a unit, or quantity of each fuel combusted at each affected unit by the associated emission factor, and summing the results.

A $NO_x$ CEM shall be used to calculate daily $NO_x$ emissions from the FCCU wet gas scrubber stack. Emissions shall be determined by multiplying the nitrogen dioxide concentration in the flue gas by the mass flow of the flue gas. The $NO_x$ concentration in the flue gas shall be determined by a CEM.

The emission factors for all other emission units are based on the results of the most recent stack test for that unit.

Total 24-hour $NO_x$ emissions shall be calculated by adding the emissions for each emitting unit. Results shall be tabulated every day, and records shall be kept which include the meter readings (in the appropriate units) and the calculated emissions.

iii. Plantwide $SO_2$

Combined emissions of $SO_2$ shall not exceed 0.82 tons per day (tpd) and 300 tons per rolling 12-month period.

Daily $SO_2$ emissions from the FCCU wet gas scrubber stack shall be determined by multiplying the $SO_2$ concentration in the flue gas by the mass flow of the flue gas. The $SO_2$ concentration in the flue gas shall be determined by a CEM.

Daily $SO_2$ emissions from other affected units shall be determined by multiplying the quantity of each fuel used daily (24 hour usage) at each affected unit by the appropriate emission factor below.

Emission factors (EF) for the various fuels shall be as follows:

Natural gas: EF = 0.60 lb/MMscf
Propane: EF = 0.60 lb/MMscf
Plant fuel gas: the emission factor shall be calculated from the $H_2S$ measurement or from the $SO_2$ measurement obtained by direct testing/monitoring.

The emission factor, where appropriate, shall be calculated as follows:

EF (lb $SO_2$/MMscf gas) = [(24 hr avg. ppmdv $H_2S$) /10^6] [(64 lb $SO_2$/lb mole)] [(10^6 scf/MMscf)/(379 scf/lb mole)]

Where mixtures of fuel are used in a Unit, the above factors shall be weighted according to the use of each fuel.

Total 24-hour $SO_2$ emissions shall be calculated by adding the daily results of the above $SO_2$ emissions equations for natural gas, plant fuel gas, and propane combustion to the wet gas scrubber stack. Results shall be tabulated every day, and records shall be kept which include the CEM readings for $H_2S$ (averaged for each one-hour period), all meter readings (in the appropriate units), and the calculated emissions.

s. The Procter & Gamble Paper Products Company

i. Emissions to the atmosphere at all times from the indicated emission points shall not exceed the following rates:

Source: Boilers (Each)

| Pollutant | Oxgen Ref. | lb/hr |
|---|---|---|
| $NO_x$ | 3% | 3.3 |

Source: Paper Machines Process Stacks (Each)

| Pollutant | lb/hr |
|---|---|
| $PM_{10}$ | 6.65 |
| $PM_{2.5}$ | to be determined |

A. Compliance to the above emission limits shall be determined by stack test as outlined in Section IX Part H.11.e of this SIP.

B. By no later than January 1, 2015, stack testing shall be completed to establish the ratio of condensable $PM_{2.5}$. At that time the condensable fraction will be added and a $PM_{2.5}$ limit established.

C. Subsequent to initial compliance testing, stack testing is required at a minimum of every five years.

t. University of Utah: University of Utah Facilities

i. Emissions to the atmosphere from Building 303 shall not exceed the following rates and concentrations:

| SOURCE | POLLUTANT | ppmdv (3% $O_2$ dry) |
|---|---|---|
| A. Boilers #3 | $NO_x$ | 187 |
| B. Boilers #4a & 4b | $NO_x$ | 9 |
| C. Boilers #5a & 5b | $NO_x$ | 9 |
| D. Turbine | $NO_x$ | 9 |
| E. Turbine and WHRU Duct burner | $NO_x$ | 15 |

ii. Stack testing to show compliance with the emissions limitations of Condition i above shall be performed as specified below:

| SOURCE | POLLUTANT | INITIAL TEST | TEST FREQUENCY |
|---|---|---|---|
| A. Boilers #3 | $NO_x$ | * | every 3 years |
| B. Boilers #4a & #4b | $NO_x$ | 2018 | every 3 years |
| C. Boilers #5a & #5b | $NO_x$ | 2017 | every 3 years |
| D. Turbine | $NO_x$ | 2014 | every year |
| E. Turbine and WHRU Duct Burner | $NO_x$ | 2014 | every year |

* Initial test already performed

iii. Testing Status (To be applied to A, B, C, D, and E above)

A. To be applied to Boiler #3 above, after January 1, 2019, Boiler #3 shall only be used as a back-up/peaking boiler. Boiler #3 is only to be used when other boilers are unavailable or if the load demand cannot be met by the other boilers. Unit #3 may be operated on a continuous basis if it is replaced is replaced with a boiler(s) that is equipped with low $NO_x$ burners.

B. To be applied to boilers #4a, #4b, #5a, and #5b, initial test shall be performed by February 28th of the year specified.

C. To be applied to boilers #4a, #4b, #5a, and #5b , testing will be performed least every 3 years between December 1 through February 28/29.

D. To be applied to turbine, and turbine and WHRU Duct Burner, test will be performed at least every year between December 1 through February 28/29.

u. Vulcraft / Nucor Building Systems

i. R307-350 Miscellaneous Metal Parts and Products Coatings applies to the painting operations at Vulcraft and Nucor Building Systems.

ii. The combined plant-wide emissions of VOCs from the joist dip tanks, paint booths, spray painting, degreasers, parts cleaners, and associated operations from the Vulcraft Joist plant and the Nucor Building Systems plant shall not exceed 305.07 tons per rolling 12-month period for VOCs after January 1, 2014.

v. Wasatch Integrated Waste Management District

i. By January 1, 2019, SNCR technology shall be installed and operating on each of the two Municipal Waste Combustors for the reduction of $NO_x$ emissions.

ii. Emissions of $NO_x$ from the Mass Burn Refractory shall not exceed 350 ppmdv (7% $O_2$, dry), on a 24-hour daily block arithmetic average concentration.

iii. Compliance shall be determined by CEM.

H.13 Source-Specific Emission Limitations in Provo – UT $PM_{2.5}$ Nonattainment Area

a. Brigham Young University: Main Campus

i. All central heating plant units shall operate on natural gas from November 1 to February 28 each season beginning in the winter season of 2013-2014. Fuel oil may be used as backup fuel. The sulfur content of the fuel oil shall not exceed 0.015 % by weight.

ii. Emissions to the atmosphere from the indicated emission point shall not exceed the following rate:

| | SOURCE | POLLUTANT | ppmdv (3% $O_2$ dry) |
|---|---|---|---|
| A. | Unit #1 | $NO_x$ | 30 ppm |
| B. | Unit #4 | $NO_x$ | 30 ppm |
| C. | Unit #6 | $NO_x$ | 30 ppm |

iii. Stack testing to show compliance with the above emission limitations shall be performed as follows:

| | SOURCE | POLLUTANT | INITIAL TEST | TEST FREQUENCY |
|---|---|---|---|---|
| A. | Unit #1 | $NO_x$ | * | every three years |
| B. | Unit #4 | $NO_x$ | January 1, 2017 | every three years |
| C. | Unit #6 | $NO_x$ | January 1, 2017 | every three years |

* Unit #1 shall only be operated as a back-up boiler to Units #4 and #6 and shall not be operated more than 300 hours per rolling 12-month period. If Unit #1 operates more than 300 hours per rolling 12-month period, then low $NO_x$ burners with Flue Gas Recirculation shall be installed and tested. Unit #1 shall be stack tested within 18 months of exceeding 300 hours of operation.

b. Geneva Nitrogen Inc.: Geneva Nitrogen Plant

i. Prill Tower:

$PM_{10}$ emissions shall not exceed 0.22 ton/day and 79 ton/yr

ii. Testing

A. Stack testing shall be performed as specified below:

I. Frequency. Emissions shall be tested every three years. The source may also be tested at any time if directed by the Director.

B. The daily and rolling 12-month mass emissions shall be calculated by multiplying the most recent stack test results (lb/hr) by the appropriate hours of operation for each day and for each rolling 12-month period. Within the first 15 days of each month, a new rolling 12-month total shall be calculated using data from the previous 12 months

iii. Montecatini Plant:

$NO_x$ emissions shall not exceed 30.8 lb/hr and 288 ppmdv

iv. Weatherly Plant:

$NO_x$ emissions shall not exceed 18.4 lb/hr and 350 ppmdv

v. Testing

Compliance testing is required on the Prill tower, Montecatini Plant, and Weatherly Plants. The test date shall be performed as soon as possible and in no case later than January 1, 2019.

A. Stack testing to show compliance with the $NO_x$ emission limitations shall be performed as specified below:

I. Testing and Frequency. Emissions shall be tested every three years. The source may also be tested at any time if directed by the Director.

B. $NO_x$ concentration (ppmdv) shall be used as an indicator to provide a reasonable assurance of compliance with the $NO_x$ emission limitation as specified below:

I. Measurement Approach: $NO_x$ concentration (ppmdv) shall be determined by using a continuous $NO_x$ monitoring system.

II. Indicator Range: An excursion is defined as a one-hour average $NO_x$ concentration in excess of 200 ppmdv as measured by the continuous monitoring system. Excursions trigger an inspection, corrective action, and a reporting requirement.

III. Performance Criteria:

1. Data Representativeness: Measurements made by a continuous monitoring system shall provide a direct indicator of SCR performance. The low detectable limit is 0.01 ppmdv (in 0.5 ppmdv full scale range) and the precision is 1% of the full scale.

2. QA/QC Practices and Criteria: The continuous monitoring system shall be operated, calibrated, and maintained in accordance with manufacture's recommendations. Zero and span drift tests shall be conducted on a daily basis.

3. Monitoring Frequency: Emission should be monitored continuously and a data point should be recorded every 15 seconds.

4. Data Collection Procedure: $NO_x$ concentration (ppmdv) shall be recorded and stored electronically.

5. Averaging Period: Use 15-second $NO_x$ concentration (ppmdv) to calculate hourly average $NO_x$ concentration (ppmdv).

c. PacifiCorp Energy: Lake Side Power Plant

i. Block #1 Turbine/HRSG Stacks:
Emissions of $NO_x$ shall not exceed 2.0 ppmvd (15% $O_2$) on a 3-hour average basis.

ii. Block #2 Turbine/HRSG Stacks:
Emissions of $NO_x$ shall not exceed 2.0 ppmvd (15% $O_2$) on a 3-hour average basis.

iii. The permittee shall install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of $NO_x$ and $O_2$ monitors to determine compliance with the applicable $NO_x$ limitations.

d. Pacific States Cast Iron Pipe Company: Pipe Casting Plant

i. By January 1, 2018, all VOC emissions from all painting operations shall be routed through a thermal-oxidizer before being discharged to the atmosphere.

A. The thermal-oxidizer shall at a minimum be 95% efficient in removing VOC emissions.

B. After efficiency demonstration, a VOC limit shall be established by no later than January 1, 2019.

ii. By January 1, 2017, at a minimum, low $NO_x$ burner with flue gas recirculation technology shall be in operation on the Annealing Oven.

e. Payson City Corporation: Payson City Power

i. Emissions of $NO_x$ shall be no greater than 1.54 ton per day and 268 tons per rolling 12-month period for all engines combined.

ii. Compliance with the emission limitation shall be determined by the following equation:

Emissions (tons/day) = (Power production in kW-hrs/day) x (Emission factor in grams/kW-hr) x (1 lb/453.59 g) x (1 ton/2000 lbs)

iii. Emission factor shall be derived from the most recent emission test results. Emissions for each pollutant should be the sum of emissions from each engine and should be calculated on a daily basis.

f. Provo City Power: Power Plant

i. Emissions of $NO_x$ shall be no greater than 254 tons per rolling 12-month period for all engines and boilers combined.

ii. Compliance with the emission limitation shall be determined by the following equation:

Emissions (tons/rolling 12-month period) = (Power production in kW-hrs/rolling 12-month period) x (Emission factor in grams/kW-hr) x (1 lb/453.59 g) x (1ton/2000 lbs)

The emission factors for $NO_x$ shall be derived from the most recent emission test results.

iii. Each engine and boiler shall be tested every 8,760 hours of operation and/or at least every five years based on the date of the last stack test.

iv. $NO_x$ emissions shall be the sum of emissions from each engine and boiler.  Power productions shall be determined on a rolling 12-month total.

g. Springville City Corporation: Whitehead Power Plant

i. Emissions of $NO_x$ shall be no greater than 1.68 ton per day and 248 tons per rolling 12-month period for all Unit Engines combined.

ii. Internal combustion engine emissions shall be calculated from the operating data recorded by the CEM. Emissions shall be calculated for $NO_x$ for each individual engine in the following manner:

Daily Rate Calculation:

X* = grams/kW-hr rate for each generator
K* = total kW-hr generated by the generator each day
D = daily output of pollutant in lbs/day
D = (X * T)/453.6

* CEMS recorded data.

The daily outputs are summed into a monthly output.
The monthly outputs are summed into an annual rolling 12-month total of pollutant in tons/year.

State of Utah
GARY R. HERBERT
*Governor*

GREG BELL
*Lieutenant Governor*

Department of
Environmental Quality

Amanda Smith
*Executive Director*

DIVISION OF AIR QUALITY
Bryce C. Bird
*Director*

DAQ-082-13

**M E M O R A N D U M**

**TO:** Air Quality Board

**THROUGH:** Bryce C. Bird, Executive Secretary

**FROM:** Mark Berger, Environmental Planning Consultant

**DATE:** September 19, 2013

**SUBJECT:** PROPOSE FOR PUBLIC COMMENT: Amend R307-110-17. Section IX, Control Measures for Area and Point Sources, Part H, Emission Limits.

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Emission control measures associated with the new State Implementation Plans (SIPs) for $PM_{2.5}$ will have to be incorporated into the air quality rules. R307-110-17 is the rule that presently does this. We are proposing to expand Section IX, Part H of the SIP to add emission limitations for $PM_{2.5}$ and $PM_{2.5}$ precursors. The proposed amendment to R307-110-17 would re-incorporate SIP Section IX, Part H after the control measures for $PM_{2.5}$ have been added.

<u>Staff Recommendation</u>: Staff recommends the Board propose R307-110-17 for public comment.

195 North 1950 West • Salt Lake City, Utah
Mailing Address: P.O. Box 144820 • Salt Lake City, Utah 84114-4820
Telephone (801) 536-4000 • Fax (801) 536-4099 • T.D.D. (801) 536-4414
*www.deq.utah.gov*

**R307. Environmental Quality, Air Quality.**
**R307-110. General Requirements: State Implementation Plan.**
**R307-110-17. Section IX, Control Measures for Area and Point Sources, Part H, Emissions Limits.**

The Utah State Implementation Plan, Section IX, Control Measures for Area and Point Sources, Part H, Emissions Limits, as most recently amended by the Utah Air Quality Board on [~~May 4, 2011~~]January 8, 2014, pursuant to Section 19-2-104, is hereby incorporated by reference and made a part of these rules.

**KEY: air pollution, PM10, PM2.5, ozone**
**Date of Enactment or Last Substantive Amendment: 2014**
**Notice of Continuation: February 1, 2012**
**Authorizing, and Implemented or Interpreted Law: 19-2-104(3)(e)**

Department of
Environmental Quality

Amanda Smith
*Executive Director*

DIVISION OF AIR QUALITY
Bryce C. Bird
*Director*

State of Utah

GARY R. HERBERT
*Governor*

GREG BELL
*Lieutenant Governor*

DAQC-1105-13

## MEMORANDUM

**TO:** Air Quality Board

**FROM:** Bryce C. Bird, Executive Secretary

**DATE:** September 9, 2013

**SUBJECT:** Compliance Activities – August 2013

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Annual Inspections Conducted:

Major........................................................................ 16
Synthetic Minor .......................................................... 3
Minor ........................................................................ 37

On-Site Stack Test Audits Conducted: ............................................................. 4

Stack Test Report Reviews: ............................................................................ 48

On-Site CEM Audits Conducted: .................................................................... 22

Emission Reports Reviewed: ........................................................................... 15

Temporary Relocation Requests Reviewed & Approved: ................................ 6

Fugitive Dust Control Plans Reviewed & Accepted: .................................... 107

Soil Remediation Report Reviews: ................................................................... 0

[1]Miscellaneous Inspections Conducted: ............................................................ 3

Complaints Received: ...................................................................................... 26

Breakdown Reports Received: .......................................................................... 0

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Compliance Actions Resulting From a Breakdown.......................................... 0

Warning Letters Issued: ..................................................................................... 3

Notices of Violation Issued:............................................................................... 0

Compliance Advisories Issued:......................................................................... 11

Settlement Agreements Reached: ..................................................................... 0

[1]Miscellaneous inspections include, e.g., surveillance, level I inspections, VOC inspections, complaints, on-site training, dust patrol, smoke patrol, open burning, etc.

Department of
Environmental Quality

Amanda Smith
*Executive Director*

DIVISION OF AIR QUALITY
Bryce C. Bird
*Director*

State of Utah

GARY R. HERBERT
*Governor*

GREG BELL
*Lieutenant Governor*

DAQC-1105-13

**M E M O R A N D U M**

**TO:** Air Quality Board

**FROM:** Bryce C. Bird, Executive Secretary

**DATE:** September 9, 2013

**SUBJECT:** Compliance Activities – August 2013

---

Annual Inspections Conducted:

Major........................................................................ 16
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[1]Miscellaneous Inspections Conducted:............................................................ 3

Complaints Received: ....................................................................................... 26

Breakdown Reports Received:........................................................................... 0

Compliance Actions Resulting From a Breakdown.......................................... 0

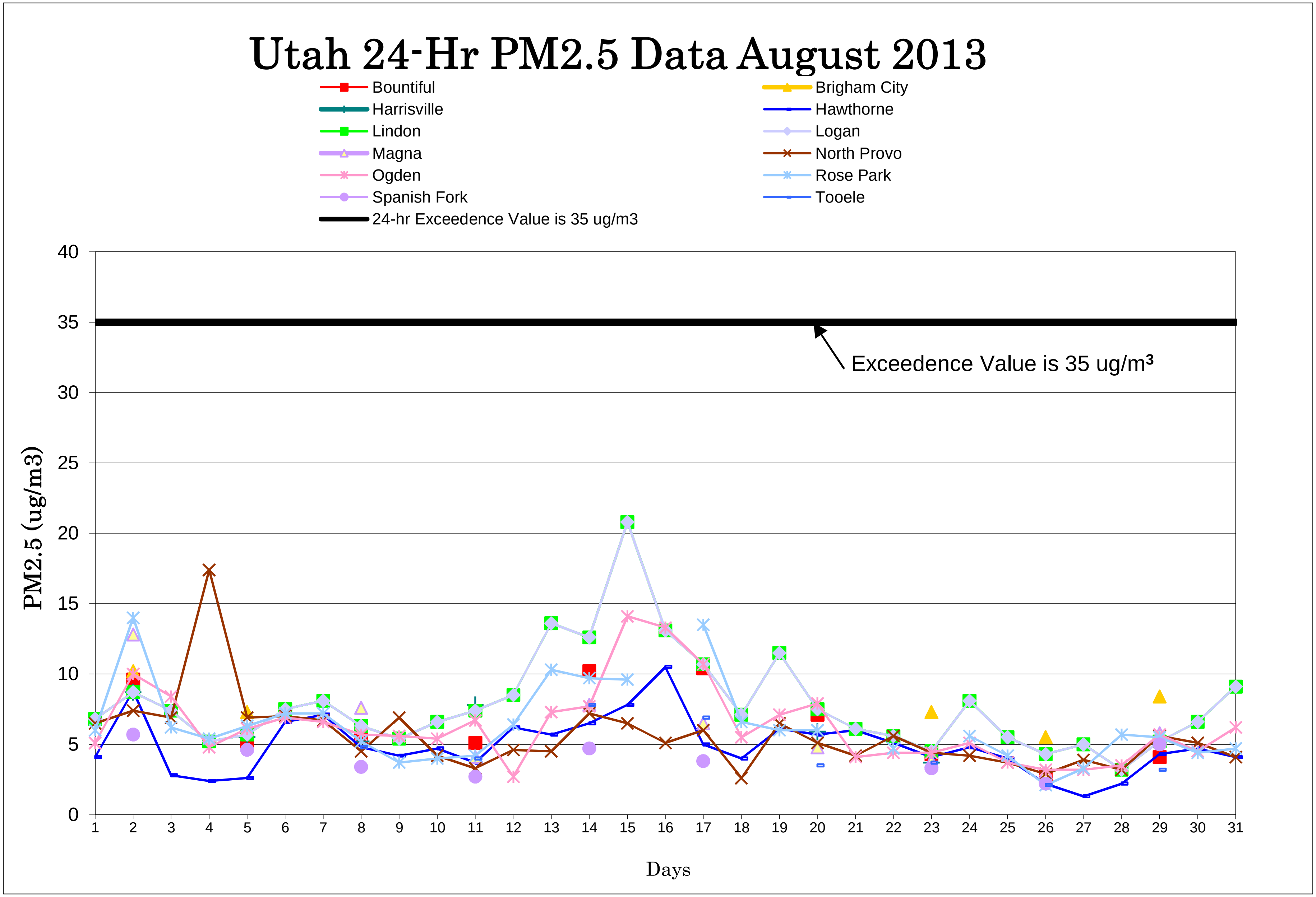
Warning Letters Issued: .................................................................................... 3

Notices of Violation Issued:.............................................................................. 0

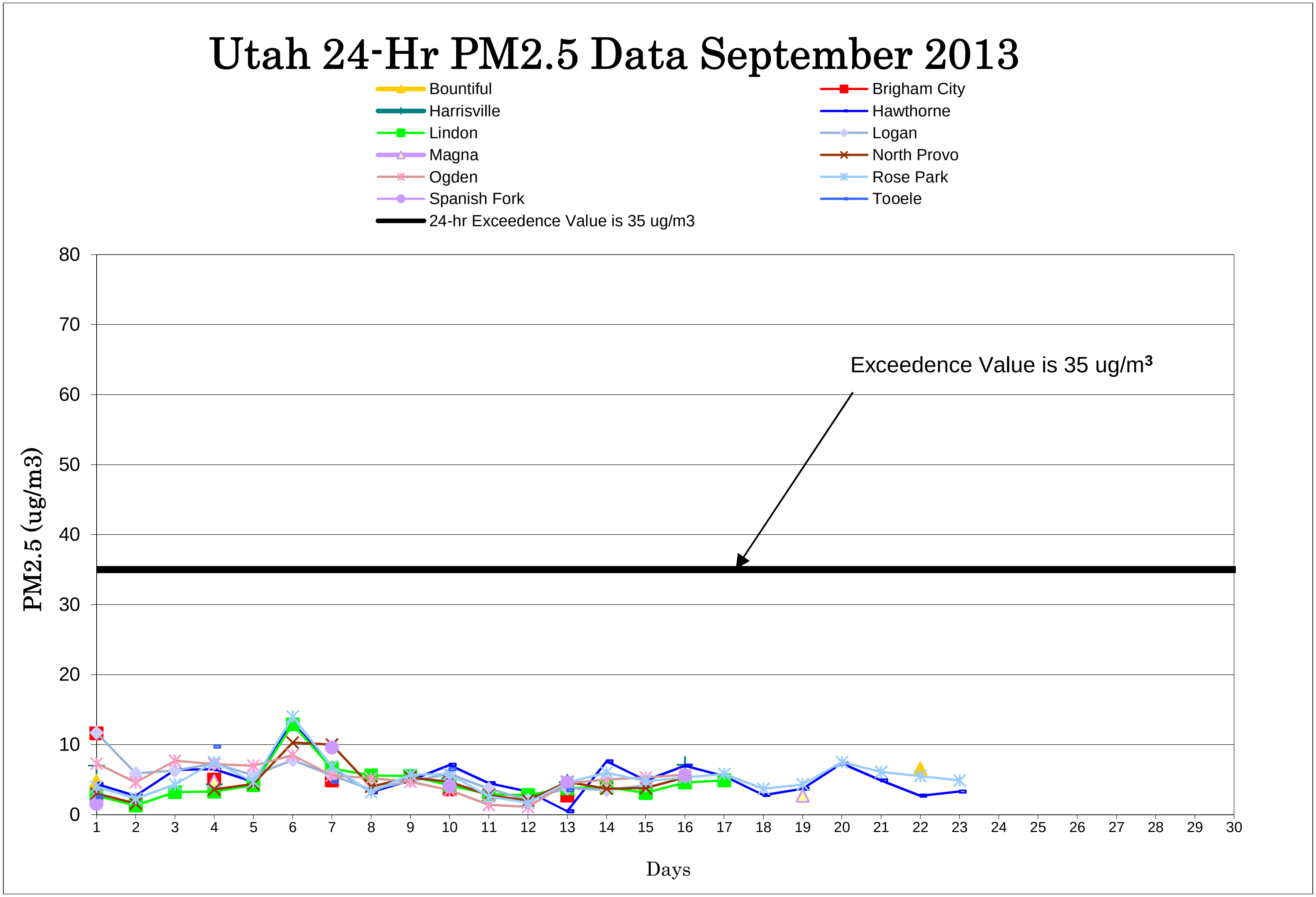
Compliance Advisories Issued:...................................................................... 11

Settlement Agreements Reached: ..................................................................... 0

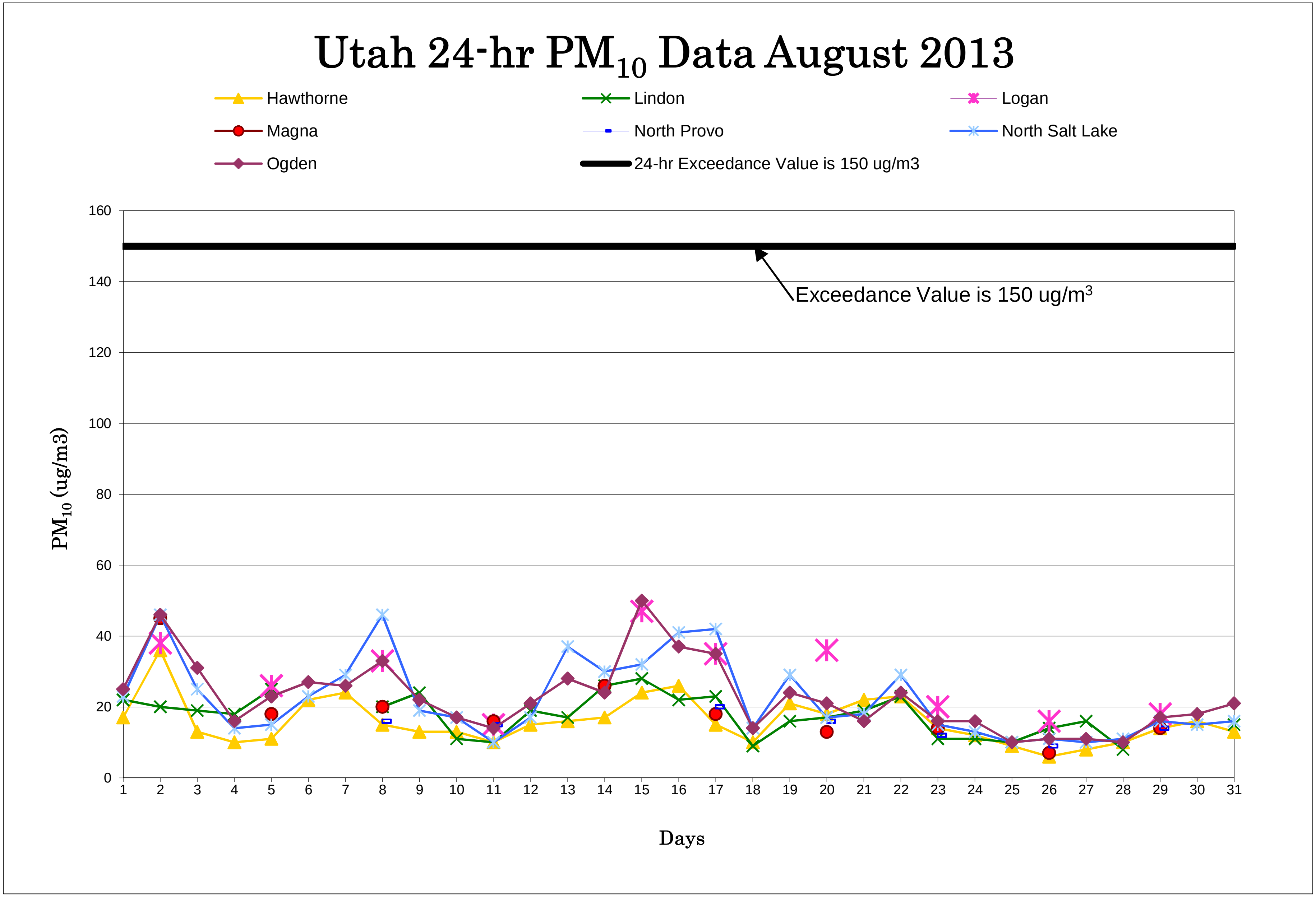
[1]Miscellaneous inspections include, e.g., surveillance, level I inspections, VOC inspections, complaints, on-site training, dust patrol, smoke patrol, open burning, etc.



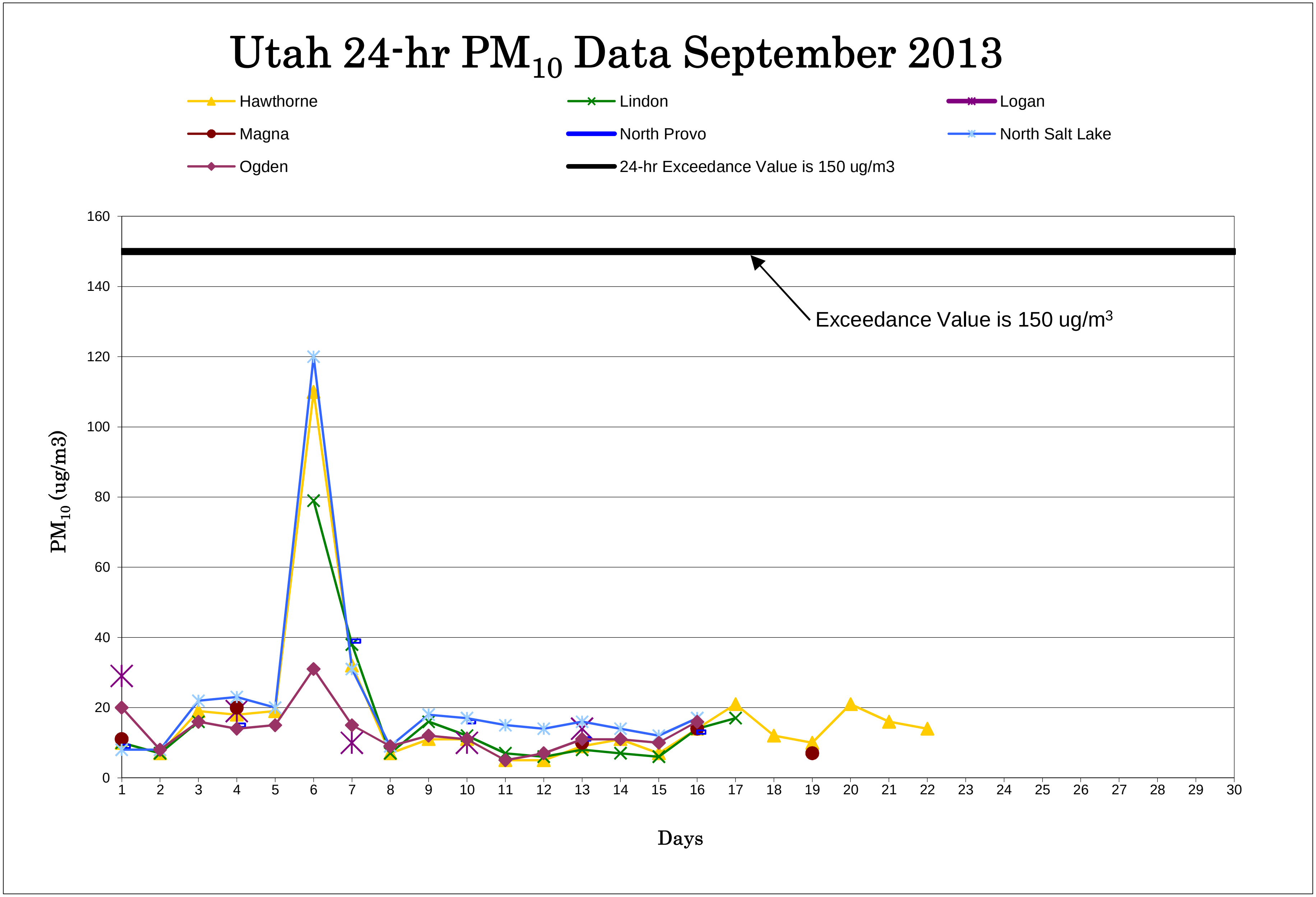

Utah Division of Air Quality



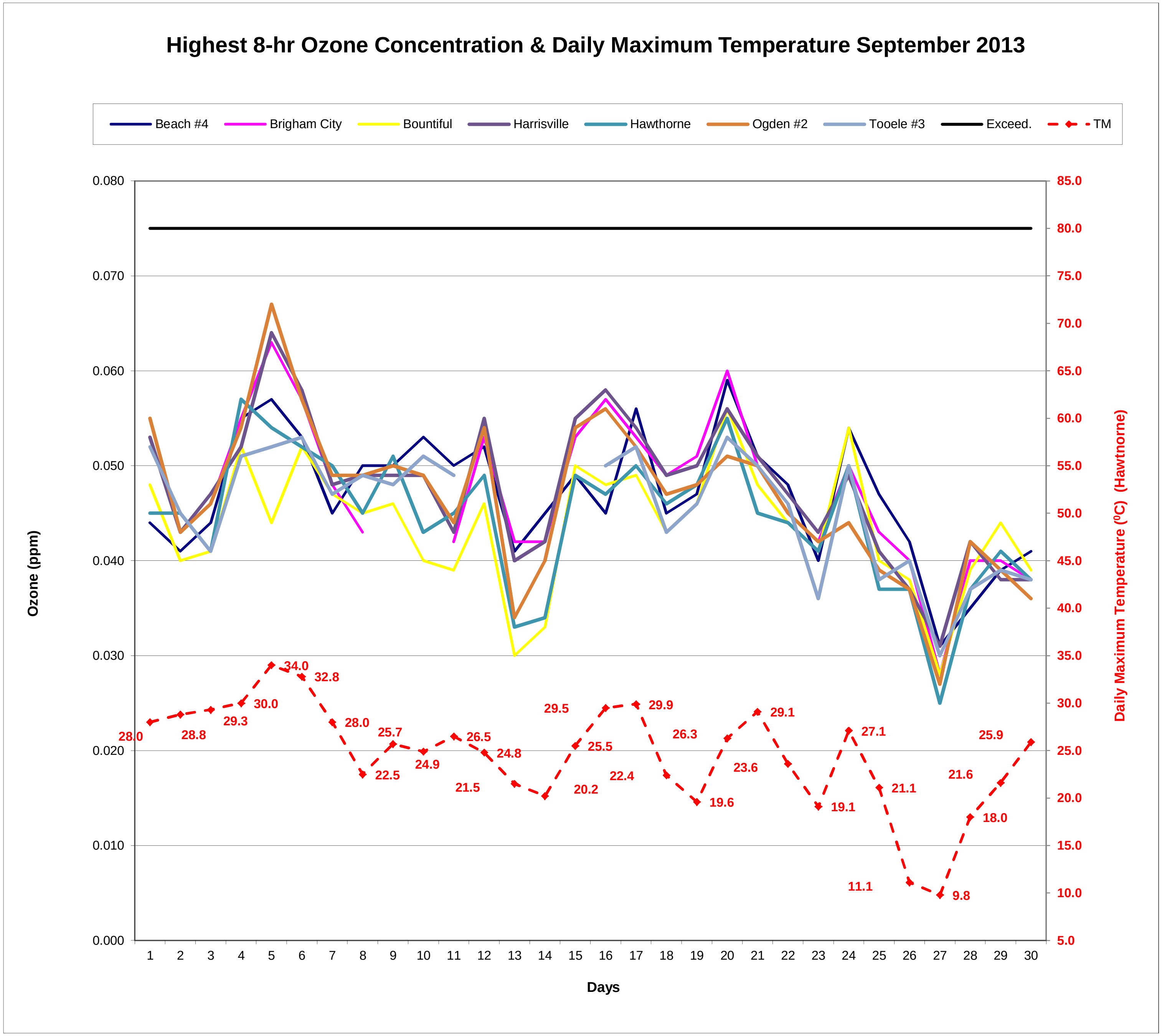

Utah Division of Air Quality



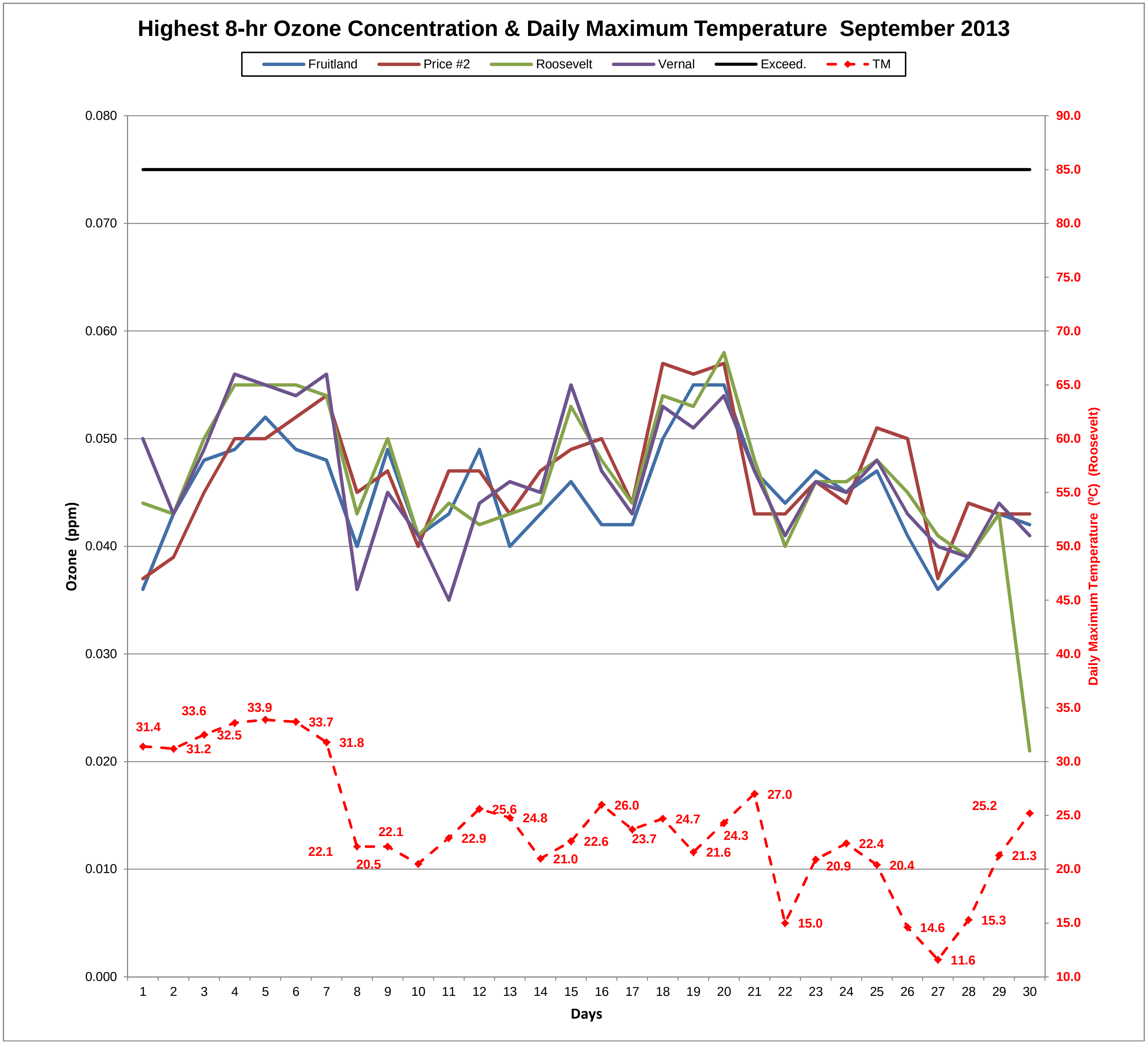

Utah Division of Air Quality



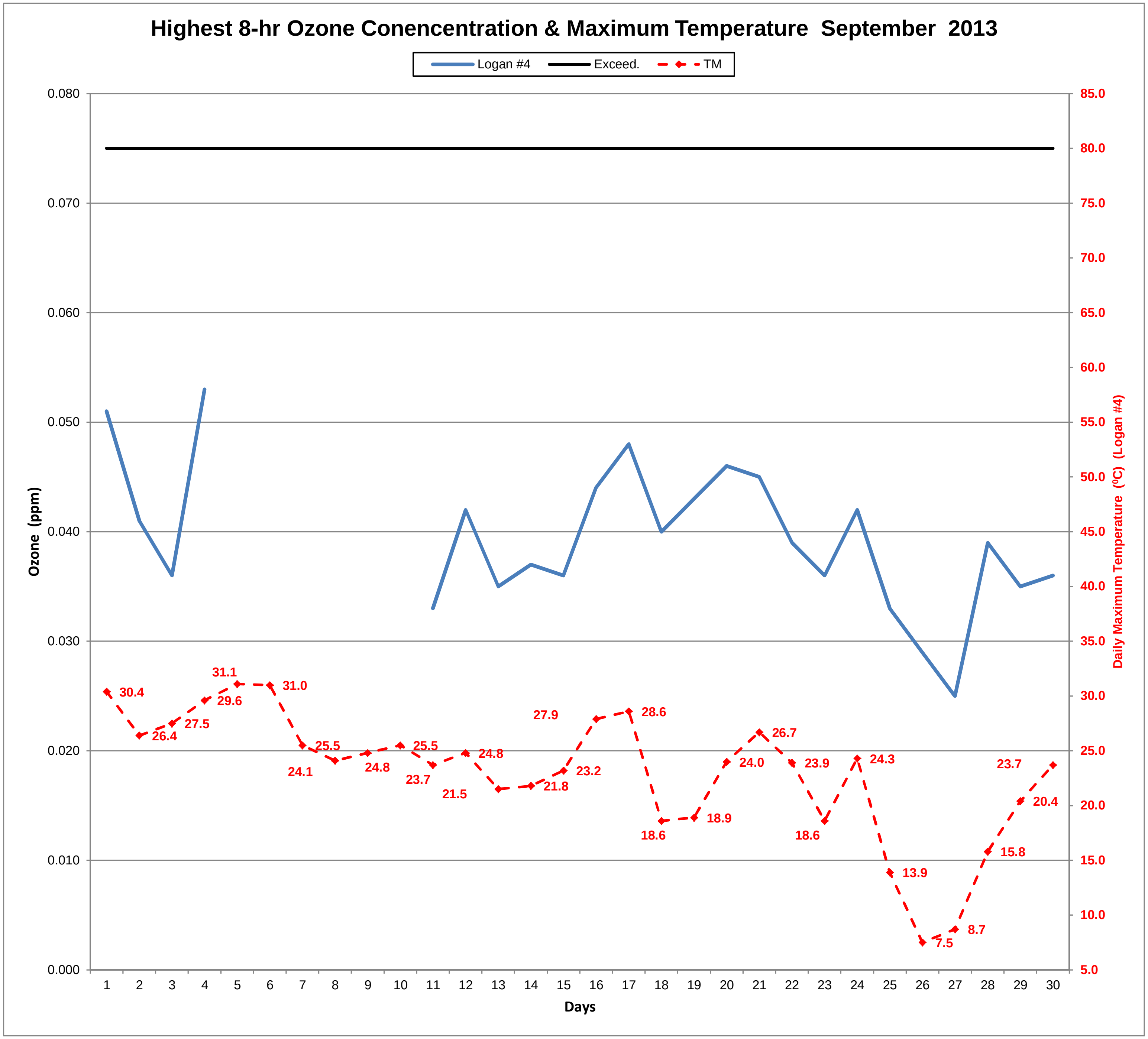

Utah Division of Air Quality



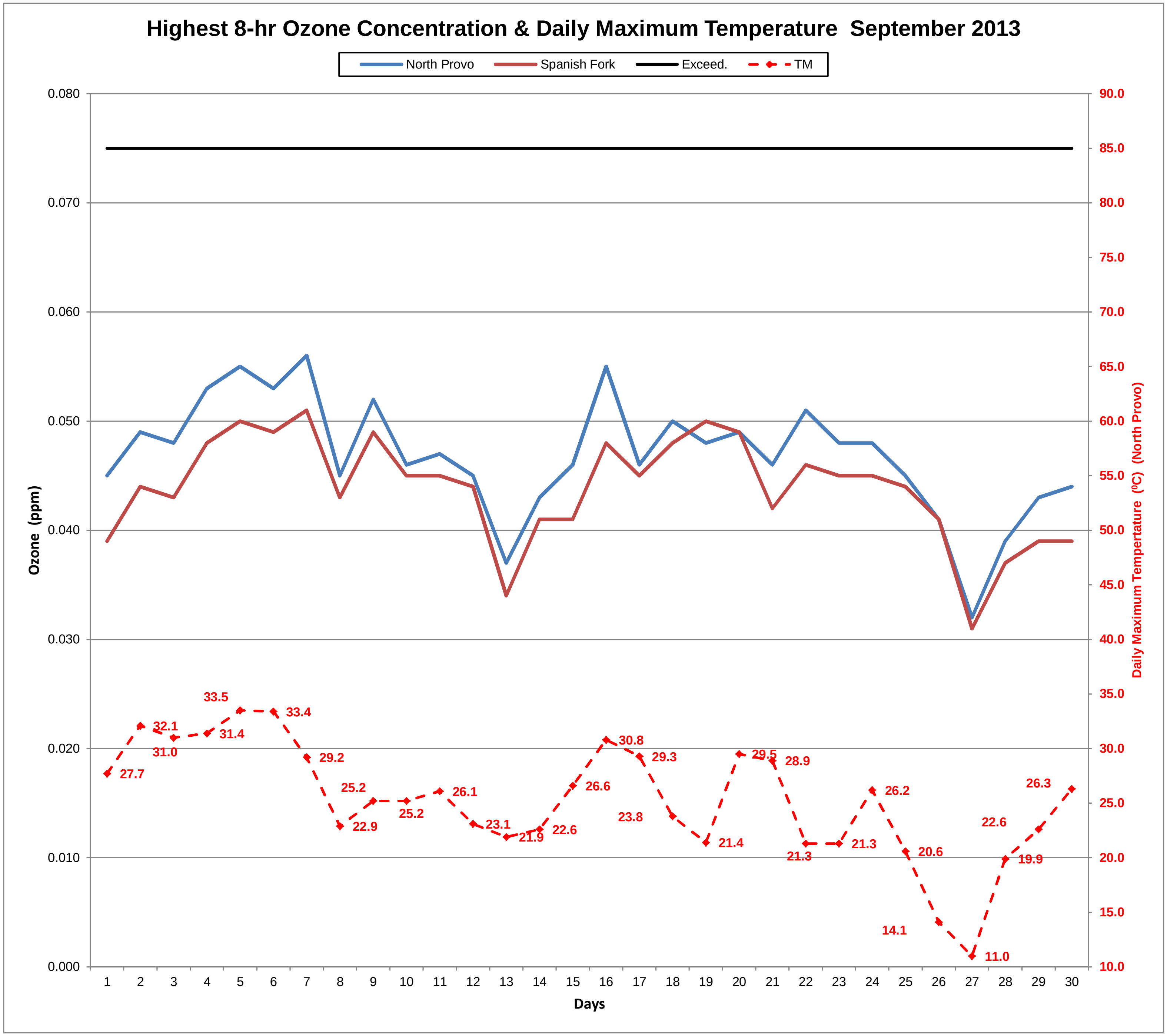
Highest 8-hr Ozone Concentration & Daily Maximum Temperature September 2013
Beach #4
Brigham City
Bountiful
Harrisville
Hawthorne
Ogden #2
Tooele #3
Exceed.
TM
Ozone (ppm)
Daily Maximum Temperature (0C) (Hawtnorne)
Days
28.0
28.8
29.3
30.0
34.0
32.8
28.0
22.5
25.7
24.9
26.5
21.5
24.8
29.5
20.2
25.5
22.4
29.9
26.3
19.6
23.6
29.1
19.1
27.1
21.1
11.1
9.8
21.6
18.0
25.9



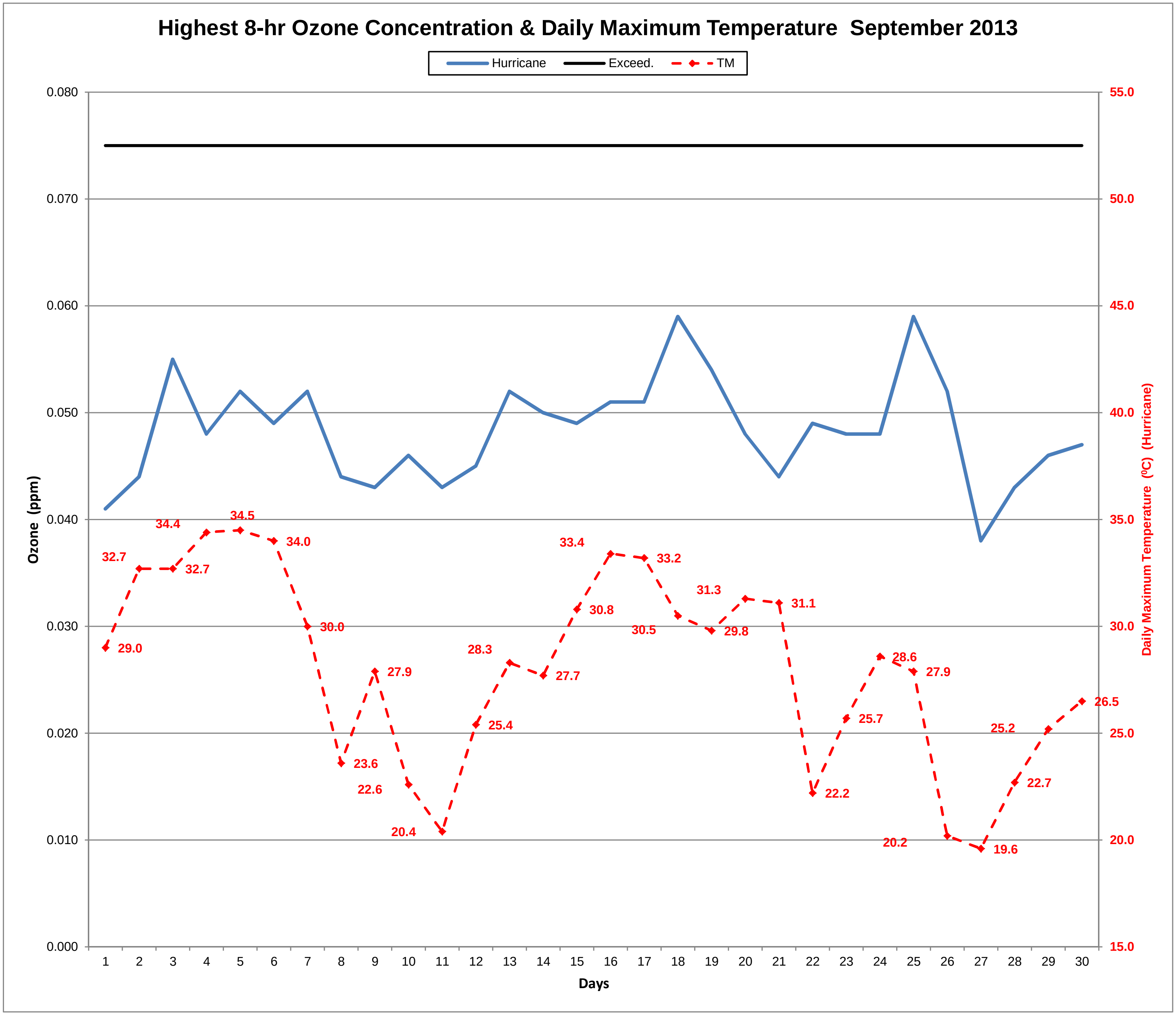
Highest 8-hr Ozone Concentration & Daily Maximum Temperature September 2013
Fruitland
Price #2
Roosevelt
Vernal
Exceed.
TM
Ozone (ppm)
Daily Maximum Temperature (°C) (Roosevelt)
Days
0.000
0.010
0.020
0.030
0.040
0.050
0.060
0.070
0.080
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0
50.0
55.0
60.0
65.0
70.0
75.0
80.0
85.0
90.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
31.4
31.2
32.5
33.6
33.9
33.7
31.8
22.1
20.5
22.1
22.9
25.6
24.8
21.0
22.6
26.0
23.7
24.7
21.6
24.3
27.0
15.0
20.9
22.4
20.4
14.6
11.6
15.3
21.3
25.2



Highest 8-hr Ozone Conencentration & Maximum Temperature September 2013
Logan #4
Exceed.
TM
Ozone (ppm)
Daily Maximum Temperature (ºC) (Logan #4)
Days
0.080
0.070
0.060
0.050
0.040
0.030
0.020
0.010
0.000
85.0
80.0
75.0
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
30.4
26.4
27.5
29.6
31.1
31.0
24.1
25.5
24.8
25.5
23.7
21.5
24.8
21.8
23.2
27.9
28.6
18.6
18.9
24.0
26.7
23.9
18.6
24.3
13.9
7.5
8.7
15.8
20.4
23.7



Highest 8-hr Ozone Concentration & Daily Maximum Temperature September 2013
North Provo
Spanish Fork
Exceed.
TM
Ozone (ppm)
Daily Maximum Tempertature (ºC) (North Provo)
Days



Highest 8-hr Ozone Concentration & Daily Maximum Temperature September 2013
Hurricane
Exceed.
TM
Ozone (ppm)
Daily Maximum Temperature (ºC) (Hurricane)
Days
0.080
0.070
0.060
0.050
0.040
0.030
0.020
0.010
0.000
55.0
50.0
45.0
40.0
35.0
30.0
25.0
20.0
15.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
29.0
32.7
32.7
34.4
34.5
34.0
30.0
23.6
27.9
22.6
20.4
25.4
28.3
27.7
30.8
33.4
33.2
30.5
31.3
29.8
31.1
22.2
25.7
28.6
27.9
20.2
19.6
22.7
25.2
26.5