State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQ-044-14

UTAH AIR QUALITY BOARD MEETING

FINAL AGENDA

Wednesday, June 4, 2014 - 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: July 2, 2014

III. Approval of the Minutes for May 7, 2014, Board Meeting.

IV. Propose for Public Comment: Amend R307-342-3. Adhesives and Sealants. Exemptions. Presented by Mark Berger.

V. Propose for Public Comment: New Rules R307-501. Oil and Gas Industry: General Provisions; R307-502. Oil and Gas Industry: Pneumatic Controllers; R307-503. Oil and Gas Industry: Combustion Devices; and R307-504. Oil and Gas Industry: Tank Truck Loading. Presented by Colleen Delaney and Mark Berger.

VI. Informational Items.
- A. Smoke is in Your Eyes. Presented by Vickie Bennett of the Salt Lake City Mayor's Office.
- B. Environmental Protection Agency Rulemaking for Radon Emissions for Operating Uranium Mills, 40 CFR Part 61 Subpart W. Presented by Sarah Fields of Uranium Watch.
- C. 2015 Research Program Update. Presented by Patrick Barickman.
- D. Utah Air Toxics Monitoring Report. Presented by Roman Kuprov.
- E. Wood Smoke Update. Presented by Joel Karmazyn.
- F. Air Toxics. Presented by Robert Ford.
- G. Compliance. Presented by Jay Morris and Harold Burge.
- H. Monitoring. Presented by Bo Call.
- I. 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 Dana Powers, Office of Human Resources at (801) 536-4413 (TDD 536-4414).

ITEM 3

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UTAH AIR QUALITY BOARD MEETING
May 7, 2014 – 1:30 p.m.
195 North 1950 West, Room 1015
Salt Lake City, Utah 84116

DRAFT MINUTES

I. Call-to-Order

Steven Sands called the meeting to order at 1:30 p.m.

Board members present: Karma Thomson, Tammie Lucero, Steve Sands, Kerry Kelly, Amanda Smith, Robert Paine, Kathy Van Dame, Michael Smith (attendance by telephone)

Executive Secretary: Bryce Bird

II. Date of the Next Air Quality Board Meeting: June 4, 2014

III. Approval of the Minutes for March 5, 2014, and April 2, 2014, Board Meetings.

- Karma Thomson moved the Board approve the March and April minutes as submitted. Kathy Van Dame seconded. The Board approved unanimously.

IV. Final Adoption: Amend R307-357-4. Consumer Products. Standards. Presented by Mark Berger.

Mark Berger, Environmental Planning Consultant at DAQ, stated on March 5, 2014, the Board proposed for public comment amendments to R307-357-4. The change that was proposed was to correct the volatile organic compound (VOC) limit for general purpose adhesives. The rule incorrectly cited the VOC content limit at 80% when it should have been 10%. During the 30-day public comment period, no comments were received and no public hearing was requested. Staff recommends the Board adopt R307-357-4 as proposed.

- Kathy Van Dame moved for final adoption to amend R307-357-4, Consumer Products, Standards. Robert Paine seconded. The Board approved unanimously.

V. Five-Year Review: R307-101. General Requirements. Presented by Mark Berger.

Mark Berger, Environmental Planning Consultant at DAQ, stated Utah Code requires that each rule be reviewed every five years to determine if the rule is still necessary and to determine if the

rule is still allowed under state and federal rule. This analysis is done by completing a Five-Year Notice of Review and Statement of Continuation Form that is filed with the Division of Administrative Rules. The five-year review process is not a time to amend a rule, but is simply a time to determine if the rule is still necessary. Staff has completed the five-year review for R307-101 and has determined that the rule is still necessary and allowed under both state and federal rule. This rule should be continued as it includes all the definitions that apply throughout the Air Quality Rules, incorporates by reference the most current version of the Code of Federal Regulations (CFR) cited in many of the Air Quality Rules, and is also part of Utah's State Implementation Plan, which has been federally approved. Staff recommends the Board continue R307-101 by approving the attached Five-Year Notice of Review and Statement of Continuation form to be filed with the Division of Administrative Rules.

- Robert Paine moved the Board approve the five-year review of R307-101, General Requirements. Tammie Lucero seconded. The Board approved unanimously.

VI. Propose for Public Comment: Amend R307-101-3. General Requirements: Version of Code of Federal Regulations Incorporated by Reference. Presented by Mark Berger.

Mark Berger, Environmental Planning Consultant at DAQ, stated this rule incorporates by reference the version of the CFR used in many of the rules adopted by the Air Quality Board. By having a rule that does this, it enables rules that reference the version of the CFR incorporated in R307-101-3 to all be updated with one single rule amendment. This amendment will update the version of 40 CFR from the July 1, 2012, version to the July 1, 2013, version. A table was included with the memorandum that shows what rules currently incorporate by reference the version of 40 CFR referenced in this rule and also shows what changes have been made in the CFR that affect each rule. Staff recommends the Board propose for public comment R307-101-3 as amended.

In discussion, it was noted that unless the regulated public was aware of the changes to the Federal Register, the only other way to know of changes is through these rule updates when they are out for public comment with a summary table of CFR changes.

- Kerry Kelly moved the Board propose the amended R307-101-3 for public comment. Karma Thomson seconded. The Board approved unanimously.

VII. Propose for Public Comment: R307-214. National Emission Standards for Hazardous Air Pollutants. Presented by Mark Berger.

Mark Berger, Environmental Planning Consultant at DAQ, stated R307-214 must be periodically updated to incorporate the most current version of 40 CFR parts 61 and 63. This year, DAQ is updating the rule to incorporate the 2013 versions of these parts. Since the last rule update, there have been no changes to part 61 but there have been several changes to various subparts in Part 63. The 2013 version of these subparts is already enforceable at the federal level. By incorporating these subparts, it will make them enforceable at the state level as well. A table summarizing the changes was included with the memorandum. In addition to updating the changes to specific subparts, a new National Emission Standards for Hazardous Air Pollutants for Subpart UUUUU, Coal- and Oil-Fired Electric Utility Steam Generating Units is being incorporated. Staff recommends the Board propose these amendments to R307-214 for public comment.

In discussion, staff explained that area sources are not necessarily tiny sources but that area sources may be any source that is not a major source for hazardous air pollutants (HAPs). Compliance for

minor and major facilities that are area sources for HAPs are done through normal site inspections as required in permits and approval orders. With the tiny area sources, there are so many of them that the DAQ does not have the resources to check on all of them. Compliance for tiny area sources is mainly done as they are encountered through normal routine inspection of minor or major facilities or, as is normally the case, through odor complaints where VOCs are involved. In dealing with these tiny area sources staff feels that it is best to work with the small source though education and outreach to make sure they comply with the area source maximum achievable control technology.

- Karma Thomson moved the Board propose for public comment the amended R307-214, National Emission Standards for Hazardous Air Pollutants. Tammie Lucero seconded. The Board approved unanimously.

VIII. Propose for Public Comment: Amend R307-401-12. Reduction in Air Contaminants; Amend R307-410-2. Definitions; Amend R307-410-6. Stack Heights and Dispersion Techniques. Presented by Mark Berger.

Mark Berger, Environmental Planning Consultant at DAQ, stated that on February 4, 2014, the EPA disapproved or partially disapproved several changes to Utah's permitting rules that were adopted in 2006. Staff believes the proposed rule changes in this package address EPA's concerns. Staff has also spoken with their EPA counterparts to which they have stated that they are satisfied with the proposed changes. Staff recommends the Board propose the amendments to R307-401-12, R307-410-2, and R307-410-6 for public comment.

- Kathy Van Dame moved that the Board propose the amended R307-401-12, Reduction in Air Contaminants, R307-410-2, Definitions, and R307-410-6, Stack Heights and Dispersion Techniques, for public comment. Kerry Kelly seconded. The Board approved unanimously.

IX. Informational Items.

A. Utah Physicians for Healthy Environment. Health Effects of Wood Smoke. Presented by Brian Moench.

Brian Moench, President of Utah Physicians for Healthy Environment, stated that he is addressing the Board as a result of Governor Herbert's statement that he would like to see the Board make a ruling that would at some point ban wood burning in nonattainment areas during the winter inversion season. Dr. Moench presented to the Board additional information from a previous presentation with regard to the health justification for such a ruling. Dr. Moench then presented to the Board his recommendations which are based on the San Joaquin Valley Air Quality District's 2012 $PM_{2.5}$ plan in which they evaluate the pollution of various sources regarding their relevance to attainment; take into account the toxicity of various chemicals species; take into account the particle size of deposition beyond just $PM_{2.5}$ size but various sub segments of that size fraction; take into account proximity to sources of particular sources of $PM_{0.1}$; and their focus on population intake fraction. These recommendations are particularly relevant with regard to the issue of wood burning and the control of wood burning. Studies have found that a single wood burning household had the effect of enveloping the adjacent and downwind homes with a $PM_{0.1}$ plume by infiltrating those homes with an average indoor concentration found to be 74% as high as immediately outside the homes. Assuming that this exposure occurred over the course of a season, the cumulative risk to the neighborhood would be considerable

and would most certainly exceed the risk indicated by the daily concentrations of $PM_{2.5}$ as measured by ambient monitors. In closing, Dr. Moench states that what we have with wood burning are serious hotspots and real local victims that are created in the community. We should not look at regulating wood burning as what it does to overall community $PM_{2.5}$ but what it does to the exposed neighbors. If we can change that thought process, then he hopes the Board will make a ruling consistent with Governor Herbert's request.

B. Wood Smoke Workgroup. Presented by Joel Karmazyn.

Joel Karmazyn, Environmental Scientist at DAQ, explained that wood smoke plays a significant role in our attainment. DAQ conducted a wood smoke workgroup of stakeholders with the idea to improve compliance with the wood smoke prohibition to at least 95% and to evaluate and recommend to the Board methods to reduce smoke emissions. The workshop agenda consisted of an educational component on $PM_{2.5}$, an explanation of the state smoke management plan, compliance summary, and concluded with a presentation of all of the available smoke emission control options. Regarding the objective of increasing compliance there was consensus that improved education enforcement is necessary. The most likely path forward is to work with the county health departments on developing consistent ordinances and assist DAQ with compliance. Regarding the objective of reducing smoke emissions, consensus was more difficult. There was positive discussion about creating a rule to regulate industrial burning and conversions of sole sources to cleaner fuels. Mr. Karmazyn then addressed and answered questions from the Board.

In discussion, the Board recommends staff invite the Utah Association of Realtors come and address the Board with their concerns of a real estate rule. That staff report back to the Board of information received from fire chiefs of their experience with the infrared cameras, feedback they may have, and the possibility of providing staff with additional training on its use. In addition, that staff report back to the Board in a year of their experience and testing with the infrared cameras. That staff take an action to see what it would look like to expand the no burn program to all sources and also to report back to the Board on a plan of converting all the sole sources on the registry.

C. Division of Air Quality Policy on Calling Mandatory No Burn Periods. Presented by Kimberly Kreykes.

Kimberly Kreykes, Environmental Scientist at DAQ, gave an overview of how DAQ determines the daily morning and afternoon air quality forecasts, or as conditions change. Winter particulate and summer ozone are the primary seasons with the possibility of exceptional events. Other elements of concern include pollution concentration trends, meteorology, and other conditions such as fire, drought conditions, and ground cover. New this year is DAQ's preemptive forecast of calling mandatory action days early on when conditions forecast that an inversion is expected. In discussion, it was noted that the updates to the monitoring pages for data were in direct response to media requests. A good deal of effort has been made in working with the media in getting the information out so that people understand what the actual conditions are and the expected forecast of the conditions. Legislation passed this year which created a Research Stewardship Coordinator at the Department of Administrative Services who will collect and disseminate information among all state agencies.

D. Utah Division of Air Quality Fiscal Year 2015 Research Program. Presented by Patrick Barickman.

Patrick Barickman, Technical Analysis Section Manager at DAQ, stated that the main goals of the 2015 research program is the protection of public health, improve capacity to respond to regulatory responsibilities, and to improve inspection and compliance. Mr. Barickman then explained the process and pointed out that in keeping with the legislature and citizens' desire to make tangible progress, DAQ will be seeking projects that can be completed in a six to eighteen month time frame. In addition, at the conclusion of the research time horizon, an analysis and quantification of the health and air quality impacts and benefits will be conducted. DAQ wants to be cognizant of and focus on the fact that these projects will go directly to solving air quality problems and also the need to return to the Board and the Legislature in a year or so to show the accomplishments made with this research money. Funding for the research programs will be statewide with primary areas along the Wasatch Front and in the Uinta Basin. In discussion, the Board asks to be updated at the next Board meeting about the proposed areas of research and then at a later meeting be updated on which research projects will be awarded.

E. $PM_{2.5}$ State Implementation Plan Subpart 4 Update. Presented by Bill Reiss.

Bill Reiss, Environmental Engineer at DAQ, updated that DAQ had just completed the $PM_{2.5}$ SIPs for each of Utah's three nonattainment areas. When the SIPs were finished we knew that the D.C. Circuit Court decided that EPA should not have ignored Subpart 4of the Clean Air Act (CAA) which was the part that address clean air requirements for nonattainment areas. Also, EPA had proposed its deadlines rule which actually starts using Subpart 4 and designates all of our three areas as moderate nonattainment areas and sets the dates by which we need to show that we are attaining the standard. Those submittals are due then end of this years and the attainment dates then follow by the end of 2015.

Mr. Reiss stated that as we go through Subpart 4 the important thing to remember is that control strategies adopted as part of the SIPs already completed will be fundamentally unchanged from what we've done so far and we are not going to go back through that at this time. We will need to change a couple of the dates associated with implementation of RACT measures and a few other minor things. The biggest change will be the attainment date of December 31, 2015. One of the things allow under Subpart 4 for moderate is that the SIP we turn in may show that the areas will not attain the standard by the attainment date, but Subpart 4 also provides the appropriate backstop for that. That being the case, that would make the classification of our nonattainment from moderate to serious. At which point we would go back and review the SIPs and that may give us a better new attainment date which would be right back in 2019, which is where we expected to comply with the standard. EPA has since come out with its deadline rule with the expected dates. A separate EPA rule is its implementation rule for $PM_{2.5}$ when $PM_{2.5}$ was first introduced as an indicator for particulate matter and it basically refers to all the requirements of the active rules. This will provide us with a lot more clarity as we go back through the serious SIPs that will be submitted. In addition, when the Logan SIP was submitted prior to the D.C. Circuit Court's decision we were hopeful that no change would be needed. But we find that EPA is obligated to address that SIP as well under Subpart 4 and so we will be updating that SIP as well. In closing, DAQ is on track with the work that has been outlined to get the SIPs turned in by the deadline. The Board should expect them to be presented at the September meeting.

F. 2012 Regional Sulfur Dioxide Emissions and Milestone Report. Presented by Mark Berger.

Mark Berger, Environmental Planning Consultant at DAQ, stated that currently the states of Utah, New Mexico, Wyoming, and Albuquerque-Bernalillo County have Section 309 Regional Haze State Implementation Plans under the CAA for regional haze that impairs visibility at Class I areas. Under the Section 309 SIPs, voluntary emissions reduction milestones for SO_2 for each year were set. If sources do not meet the SO_2 milestone targets through the voluntary program, then a backstop trading program would be triggered. Beginning in 2004, participating 309 states have collaborated in tracking emissions from sources of SO_2, comparing them to the milestone, and publishing those results in an annual Milestone Report that is submitted to EPA. This is the final report that went through a 30 day public notice period and was submitted to EPA the end of March 2014. In summary, the milestone for 2012 was 200,722 tons of SO_2 and the three year average of SO_2 emissions in the region was 115,115 tons, which is 43 percent below the milestone. In fact, those emissions are well below the milestone set for 2018 of 141,849 tons. We view this program as being successful with qualitative analysis.

G. Air Toxics. Presented by Robert Ford.

H. Compliance. Presented by Harold Burge and Tony DeArcos.

I. Monitoring. Presented by Bo Call.

J. Other Items to be Brought Before the Board.

Michael Smith inquired if staff was aware of any changes with regard to Utah Department of Transportation and the Utah Transit Authority (UTA) and where they are headed on transportation improvements and structures. To which staff responded that UTA's stated goal for their next planning period is to improve local transportation. There was a lot of discussion in the legislature about increased funding options but in the end none of the options were approved.

Public comment from Matt Pacenza of Healthy Environment Alliance (HEAL) of Utah was introduced. Mr. Pacenza commented that he was surprised that the huge list of things discussed at the wood smoke workgroup in January appear to be narrowed down to a couple of things presented today. It was his understanding that the workgroup would be a kickoff to a process that would involve multiple meetings and additional conversations on a wide range of things. As an example, he suggests that we should not only target individuals who choose to burn wood but to also target the sellers of wood through something that would require signage or even permits. Mr. Pacenza suggests the Board think about reopening the process and encourage a broader look.

In response to Mr. Pacenza's comments, staff responded that as DAQ works through the wood smoke issue, we can revisit the workgroup list several times and discussions can be reopened with input accepted through the process. Staff will update the Board on the status of future wood smoke meetings.

Meeting adjourned at 3:51 p.m.

ITEM 4

State of Utah

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Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQ-046-14

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: May 22, 2014

SUBJECT: PROPOSE FOR PUBLIC COMMENT: Amend R307-342-3, Adhesives and Sealants, Exemptions.

In R307-342-3, operations that are covered by Department of Defense (DOD) military technical specifications and standards and performed on site at installations owned and/or operated by the United States Armed Forces are exempt from the requirements of R307-342. We recently received a letter from L-3 Communications pointing out that the Board recently amended R307-335, Degreasing and Solvent Cleaning, and R307-350, Miscellaneous Metal Parts and Products Coatings, to expand the exemption to include DOD contractors. L-3 Communications requested that the Board amend R307-342-3 to match the existing exemptions for DOD contractors in R307-335 and R307-350.

Because L-3 Communications and other sources in Utah must use DOD military specifications for adhesives and sealants used in much of their products sold to the United States Armed Forces, we agree that the rule should be amended as requested.

Staff Recommendation: Staff recommends the Board propose for public comment R307-342-3.

R307. Environmental Quality, Air Quality.
R307-342. Adhesives and Sealants.
R307-342-3. Exemptions.

(1) The requirements of R307-342 do not apply to the following:

(a) Adhesives, sealants, adhesive primers or sealant primers being tested or evaluated in any research and development, quality assurance or analytical laboratory;

(b) Adhesives and sealants that contain less than 20 grams of VOC per liter of adhesive or sealant, less water and exempt solvents, as applied;

(c) Cyanoacrylate adhesives;

(d) Adhesives, sealants, adhesive primers or sealant primers that are sold or supplied by the manufacturer or supplier in containers with a net volume of 16 fluid ounces or less or that have a net weight of one pound or less, except plastic cement welding adhesives and contact adhesives;

(e) Contact adhesives that are sold or supplied by the manufacturer or supplier in containers with a net volume of one gallon or less;

(f) Aerosol adhesives and primers dispensed from aerosol spray cans; or

(g) Polyester bonding putties to assemble fiberglass parts at fiberglass boat manufacturing facilities and at other reinforced plastic composite manufacturing facilities.

(2) The requirements of R307-342 do not apply to the use of adhesives, sealants, adhesive primers, sealant primers, surface preparation and cleanup solvents in the following operations:

(a) Tire repair operations, provided the label of the adhesive states "for tire repair only;"

(b) In the production, rework, repair, or maintenance of aerospace vehicles and components, and undersea-based weapon systems;

(c) In the manufacture of medical equipment;

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

(e) Plaque laminating operations in which adhesives are used to bond clear, polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992.

(3) The requirements of R307-342 do not apply to commercial and industrial operations if the total VOC emissions from all adhesives, sealants, adhesive primers and sealant primers used at the source are less than 200 pounds per calendar year.

(4) Adhesive products and sealant products shipped, supplied or sold exclusively outside of the areas specified in R307-342-2 are exempt from the requirements of this rule.

(5) R307-342 shall not apply to any adhesive, sealant, adhesive primer or sealant primer products manufactured for shipment and use outside of the counties specified R307-342-2 as long as the manufacturer or distributor can demonstrate both that the product is intended for shipment and use outside of the applicable counties

and that the manufacturer or distributor has taken reasonable prudent precautions to assure that the product is not distributed to the applicable counties.

(6) R307-342 shall not apply to the use of any adhesives, sealants, adhesive primers, sealant primers, cleanup solvents and surface preparation solvents, provided the total volume of noncomplying adhesives, sealants, primers, cleanup and surface preparation solvents applied facility-wide does not exceed 55 gallons per rolling 12-month period.

(7) Commercial and industrial operations claiming exemption pursuant to R307-342-3 shall record and maintain operational records sufficient to demonstrate compliance.

KEY: air pollution, adhesives, sealants, primers
Date of Enactment or Last Substantive Amendment: August 1, 2013
Authorizing, and Implemented or Interpreted Law: 19-2-104(1)(a)

ITEM 5

State of Utah

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DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQ-045-14

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: May 21, 2014

SUBJECT: PROPOSE FOR PUBLIC COMMENT: New Rules R307-501. Oil and Gas Industry: General Provisions; R307-502. Oil and Gas Industry: Pneumatic Controllers; R307-503. Oil and Gas Industry: Combustion Devices; R307-504. Oil and Gas Industry: Tank Truck Loading.

Background

Ozone is created by a photochemical reaction and the main precursors are volatile organic compounds (VOC) and nitrogen oxides (NO_x). High ozone levels have been measured in the Uinta Basin during winter temperature inversions when there is snow on the ground, which enhances the chemical reactions that create ozone. Elevated summertime ozone levels occur throughout the state. While summertime ozone is currently below the National Ambient Air Quality Standards (NAAQS), EPA is expected to lower the ozone standard to within the range of 60 – 70 ppb within the next two years. Depending on the level of the standard, a significant portion of Utah may exceed the new NAAQS. See Figure 1.

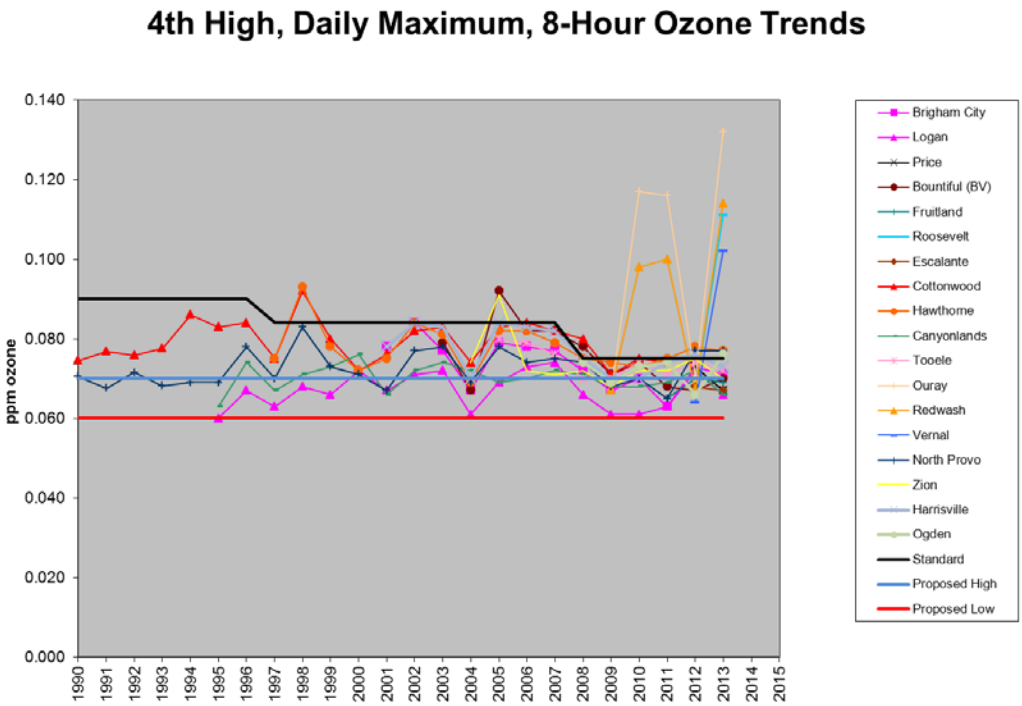


Figure 1. Ozone Trends in Utah, Source EPA AirData

Oil and gas production is the most significant source of anthropogenic VOC in Utah. In the Uinta Basin, oil and gas production accounts for 97% of anthropogenic VOC emissions.

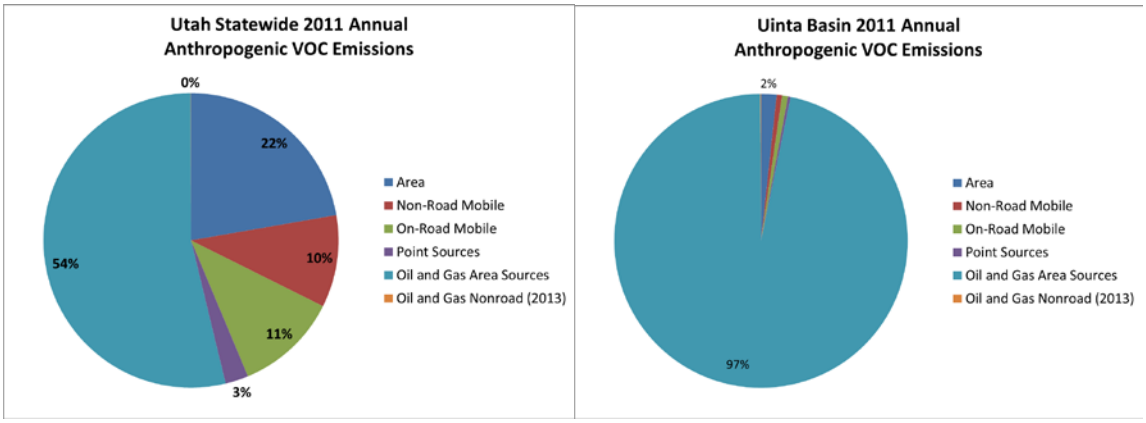


Figure 2. 2011 Annual Emissions

The State of Utah entered into EPA's Ozone Advance Program in 2012 with the goal to proactively lower ozone values in the Uinta Basin. As part of that effort, DAQ drafted the four attached rules to establish general operating provisions for the oil and gas industry, establish control requirements that are highly cost-effective, and ensure that existing air pollution control equipment operates effectively. These draft rules were presented at an Oil and Gas Stakeholder public information meeting on July 30, 2013, and have been revised to address stakeholder comments.

General Provisions

The General Provisions rule, R307-501, establishes general requirements for prevention of emissions and use of good air pollution control practices for all oil and gas exploration, production, transmission and distribution operations; well production facilities; natural gas compressor stations; and natural gas processing plants. The rule requires that operating and maintenance procedures are conducted in a manner consistent with good air pollution control practices.

Pneumatic Controllers

Pneumatic controllers powered by pressurized natural gas are used in the oil and gas industry. In the past, high-bleed devices that vent natural gas to the atmosphere were commonly used. The recent oil and gas New Source Performance Standard (NSPS) OOOO requires the use of low-bleed controllers in most circumstances. R307-502 would require the replacement of existing high-bleed devices with low-bleed devices so that all pneumatic controllers in the state would meet the NSPS standard. While there is an initial cost to replace these controllers, there is also a benefit to the operators because the natural gas is recaptured and can be sold as product. EPA's Natural Gas Star Program estimates a cost of $2,104[1] to replace an existing high-bleed controller. More recently, Colorado[2] estimated initial costs of $1,420 to replace each high-bleed pneumatic controller. At current natural gas prices the new devices will pay for themselves in about 1½ to 2 years and will then continue to provide on-going savings to the company.

Implementation of this rule is estimated to reduce VOC emissions by 3,716 tons/year in the 5-county area included in the WRAP Phase III inventory for oil and gas (Duchesne, Uintah, Carbon, Emery, and Grand Counties). The draft rule phases in the requirement over several years. High-bleed pneumatic devices in Duchesne and Uintah Counties must be replaced by December 1, 2015 to provide reductions prior to the 2015/16 winter ozone season. High-bleed pneumatic devices in the rest of the state must be replaced prior to April 1, 2017 to provide reductions prior to the 2017 summer ozone season.

Flares

New or modified oil and gas well production sites are required to capture and control VOC emissions, and the typical control device is a flare. Utah's proposed General Approval Order (GAO) for a Crude Oil and Natural Gas Well Site and/or Tank Battery requires the VOC control device to reduce VOC emissions by 98%. The proposed GAO requires continuous compliance with this control efficiency standard. Because many well production sites are unmanned, if the wind or a surge of gas blows out the pilot light, it is possible for the combustion device to cease working for an extended period of time until personnel visit the site and relight the pilot light. During its recent rulemaking effort, Colorado estimated that pilot lights were not functioning about 3% of the time, leading to significant uncontrolled VOC emissions. Colorado estimated a cost of $2,348 to retrofit an existing flare with an auto igniter, with an annualized cost of $475. The overall cost effectiveness of the retrofit was $302/ton of VOC reduced.[3]

R307-503 would require all new flares to be equipped with a self-igniter to relight the pilot light if the flame is extinguished. The rule would also require all existing flares in Duchesne and Uintah Counties to be retrofitted with self-igniters by December 1, 2015, to provide reductions prior to the 2015/2016 winter

[1] 2006 cost estimate adjusted to current costs using September 2013 Nelson-Farrar Refinery Operation Index as recommended in *Options for Reducing Methane Emissions from Pneumatic Devices in the Natural Gas Industry*, US EPA, October 2006.
[2] Regulatory Analysis for Proposed Revisions to Colorado Air Quality Control Commission Regulation Numbers 3, 6 and 7, February 11, 2014, pages 54-55.
[3] Ibid., pages 52-53.

ozone season. Flares in the rest of the state must be replaced prior to April 1, 2017, to provide reductions prior to the 2017 summer ozone season.

Tank Truck Loading

The proposed General Approval Order for a Crude Oil and Natural Gas Well Site and/or Tank Battery contains a requirement that all tanker trucks loading on-site use either bottom filling or submerged filling to reduce VOC emissions created by splashing of liquids when loading oil, condensate, or produced water. R307-504 would expand this requirement to all existing operations. DAQ estimates that this change could reduce VOC emissions due to tank truck loading by about 59% (1,017 tons/year in the Uinta Basin in 2015). In practice, many trucks are already equipped to meet the requirements established in existing approval orders so the overall benefit will be lower if fewer retrofits are required. The new rule will provide a consistent standard for all operators. Top-loading trucks can be inexpensively retrofitted by installing a pipe at the inlet to ensure that liquids are loaded using submerged fill instead of splash loading.

Staff Recommendation: Staff recommends the Board propose for public comment new rules R307-501, R307-502, R307-503, and R307-504.

R307. Environmental Quality.
R307-501. Oil and Gas Industry: General Provisions.
R307-501-1. Purpose.

R307-501 establishes general requirements for prevention of emissions and use of good air pollution control practices for all oil and gas exploration and production operations, well production facilities, natural gas compressor stations, and natural gas processing plants.

R307-501-2. Definitions.

(1) The definitions in 40 CFR 60, Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution, which is incorporated by reference in R307-210 apply to R307-501.

(2) "Well production facility" means all equipment at a single stationary source directly associated with one or more oil wells or gas wells. This equipment includes, but is not limited to, equipment used for storage, separation, treating, dehydration, artificial lift, combustion, compression, pumping, metering, monitoring, and flowline.

R307-501-3. Applicability.

(1) R307-501 applies to all oil and gas exploration, production, distribution, and transmission operations; well production facilities; natural gas compressor stations; and natural gas processing plants in Utah.

(2) R307-501 does not apply to oil refineries.

R307-501-4. General Provisions.

(1) General requirements for prevention of emissions and use of good air pollution control practices.

(a) All intermediate hydrocarbon liquids collection, storage, processing and handling operations, regardless of size, shall be designed, operated and maintained so as to minimize emission of volatile organic compounds to the atmosphere to the extent reasonably practicable.

(b) At all times, including periods of start-up, shutdown, and malfunction, the installation and air pollution control equipment shall be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions.

(c) Determination of whether or not acceptable operating and maintenance procedures are being used will be based on information available to the director, which may include, but is not limited to, monitoring results, infrared camera images, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(2) General requirements for air pollution control equipment.

(a) All air pollution control equipment shall be operated and maintained pursuant to the manufacturing specifications or equivalent to the extent practicable and consistent with technological limitations and good engineering and maintenance practices.

(b) The owner or operator shall keep manufacturer specifications or equivalent on file.

(c) In addition, all such air pollution control equipment shall be adequately designed and sized to achieve the control efficiency rates established in rules or in approval orders issued under R307-401 and to handle reasonably foreseeable fluctuations in emissions of VOCs during normal operations. Fluctuations in emissions that occur when the separator dumps into the tank are reasonably foreseeable.

KEY: air pollution, oil, gas,
Date of Enactment or Last Substantive Amendment: 2014
Authorizing, and Implemented or Interpreted Law: 19-2-104(1)(a)

R307. Environmental Quality.

R307-502. Oil and Gas Industry: Pneumatic Controllers.

R307-502-1. Purpose.

(1) The purpose of R307-502 is to reduce emissions of volatile organic compounds from pneumatic controllers that are associated with oil and gas operations.

(2) The rule requires existing pneumatic controllers to meet the standards established for new controllers in 40 CFR Part 60, Subpart OOOO.

R307-502-2. Definitions.

(1) The definitions in 40 CFR 60, Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution, which is incorporated by reference in R307-210 apply to R307-502.

(2) "Existing pneumatic controller" means a pneumatic controller affected facility as described in 40 CFR 60.5365(d)(1) through (3) that was constructed, modified, or reconstructed prior to October 15, 2013.

R307-502-3. Applicability.

R307-502 applies to the owner or operator of any existing pneumatic controller in Utah.

R307-502-4. Retrofit Requirements.

(1) Effective December 1, 2015, all existing pneumatic controllers in Duchesne County or Uintah County shall meet the standards established for pneumatic controller affected facilities that are constructed, modified or reconstructed on or after October 15, 2013, as specified in 40 CFR 60, Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution.

(2) Effective April 1, 2017 all existing pneumatic controllers in Utah shall meet the standards established for pneumatic controller affected facilities that are constructed, modified or reconstructed on or after October 15, 2013 as specified in 40 CFR 60, Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution.

R307-502-5. Documentation Required.

The owner or operator shall identify all existing pneumatic controller facilities that were replaced or retrofitted to meet the requirements of R307-502-4 in the annual report required under 40 CFR 60.5420.

KEY: air pollution, oil, gas, pneumatic controllers
Date of Enactment or Last Substantive Amendment: 2014
Authorizing, and Implemented or Interpreted Law: 19-2-104(1)(a)

R307. Environmental Quality.
R307-503. Oil and Gas Industry: Flares.
R307-503-1. Purpose.

R307-503 establishes conditions to ensure that combustion devices used in the oil and gas industry are operated effectively.

R307-503-2. Definitions.

"Auto igniter" means a device which will automatically attempt to relight the pilot flame in the combustion chamber of a control device in order to combust volatile organic compound emissions.

R307-503-3. Applicability.

(1) R307-503 applies to all oil and gas exploration and production operations, well sites, natural gas compressor stations, and natural gas processing plants in Utah.

(2) R307-503 does not apply to oil refineries.

R307-503-3. Auto-Igniters.

(1) All open or enclosed flares used to control emissions of volatile organic compounds shall be equipped with and operate an auto-igniter as follows:

(a) All open or enclosed flares installed on or after November 1, 2014, shall be equipped with an operational auto-igniter upon installation of the flare.

(b) All open or enclosed flares installed before November 1, 2014, in Duchesne County or Uintah County shall be equipped with an operational auto-igniter by December 1, 2015, or after the next flare planned shutdown, whichever comes first.

(c) All open or enclosed flares installed before November 1, 2014, in all other areas of Utah shall be equipped with an operational auto-igniter by April 1, 2017, or after the next flare planned shutdown, whichever comes first.

R307-503-4. Recordkeeping.

The owner or operator shall maintain records demonstrating the date of installation and manufacturer specifications for each auto-igniter required under R307-503-3.

KEY: air pollution, oil, gas, flares
Date of Enactment or Last Substantive Amendment: 2014
Authorizing, and Implemented or Interpreted Law: 19-2-104(1)(a)

R307. Environmental Quality.
R307-504. Oil and Gas Industry: Tank Truck Loading.
R307-504-1. Purpose.

R307-504 establishes control requirements for the loading of liquids containing volatile organic compounds at oil or gas well sites.

R307-504-2. Definitions.

(1) The definitions in 40 CFR 60, Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution that is incorporated by reference in R307-210 apply to R307-504.

(2) "Bottom Filling" means the filling of a tank through an inlet at or near the bottom of the tank designed to have the opening covered by the liquid after the pipe normally used to withdraw liquid can no longer withdraw any liquid.

(3) "Submerged Fill Pipe" means any fill pipe with a discharge opening which is entirely submerged when the liquid level is six inches above the bottom of the tank and the pipe normally used to withdraw liquid from the tank can no longer withdraw any liquid.

(4) "Well production facility" means all equipment at a single stationary source directly associated with one or more oil wells or gas wells.

R307-504-3. Applicability.

R307-504 applies to any person who loads or permits the loading of any intermediate hydrocarbon liquid or produced water at a well production facility after January 1, 2015.

R307-504-4. Tank Truck Loading Requirements.

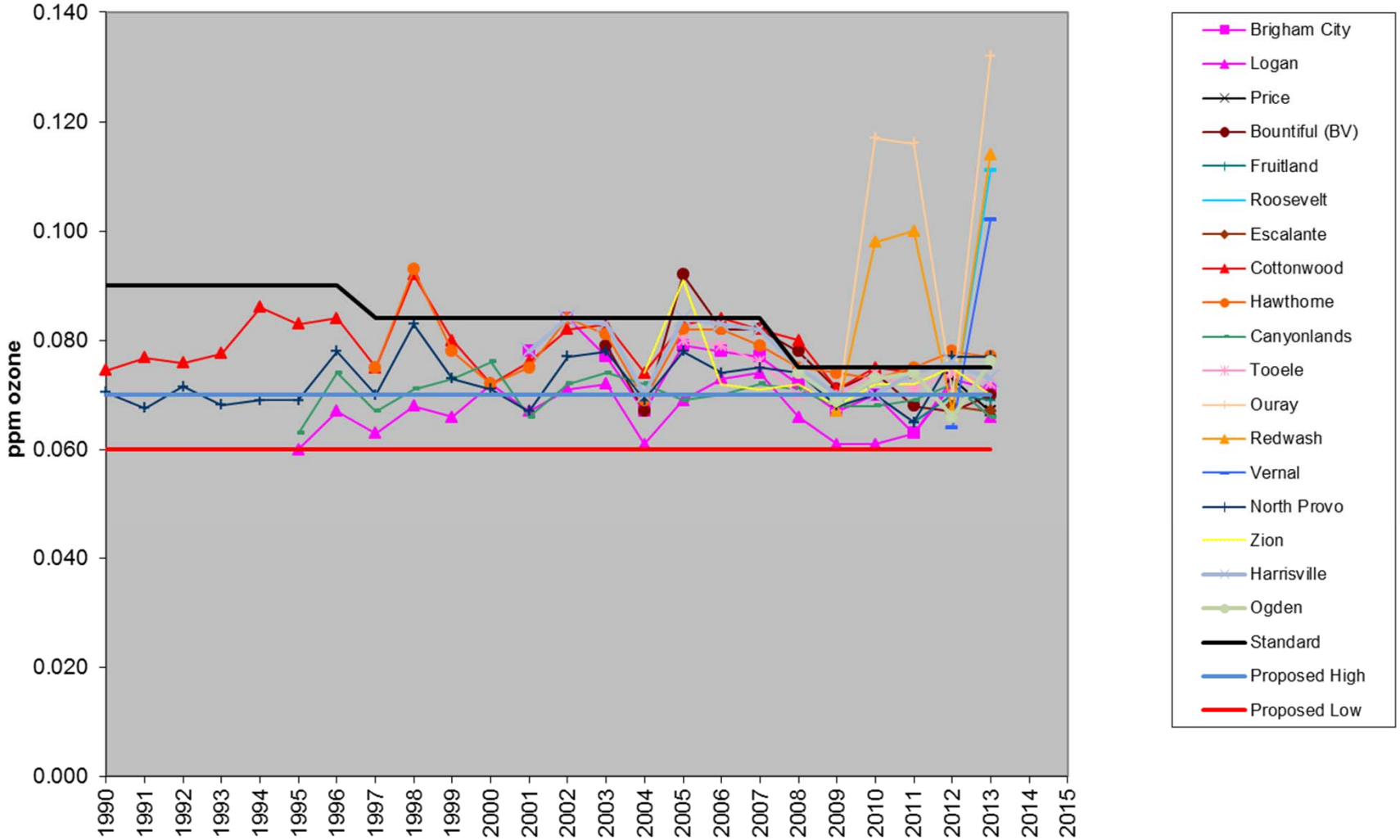
Tank trucks used for intermediate hydrocarbon liquid or produced water shall be loaded using bottom filling or a submerged fill pipe.

KEY: air pollution, oil, gas
Date of Enactment or Last Substantive Amendment: 2014
Authorizing, and Implemented or Interpreted Law: 19-2-104(1)(a)

Oil and Gas Rulemaking

Colleen Delaney
Utah Division of Air Quality
June 4, 2014

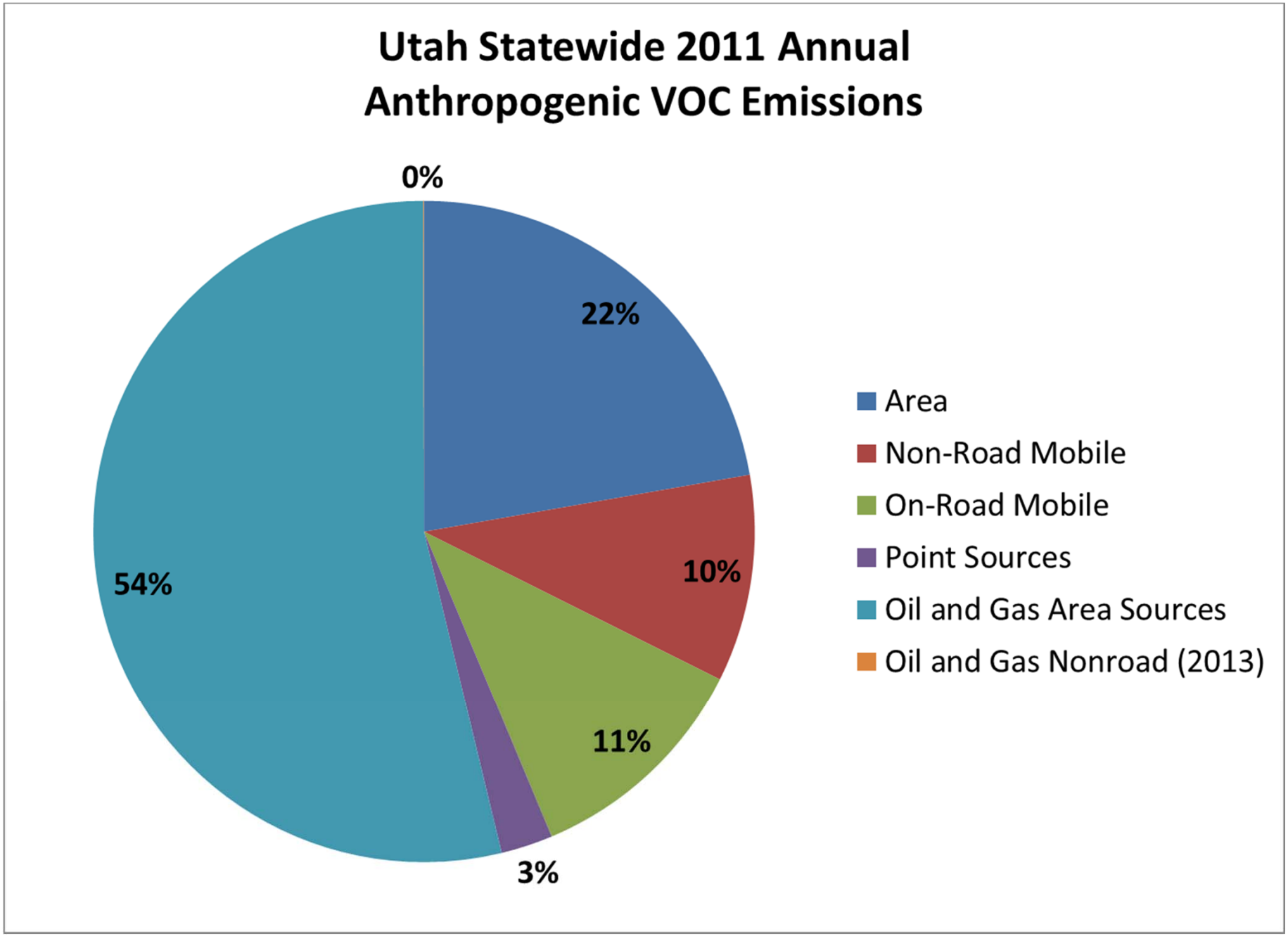
4th High, Daily Maximum, 8-Hour Ozone Trends

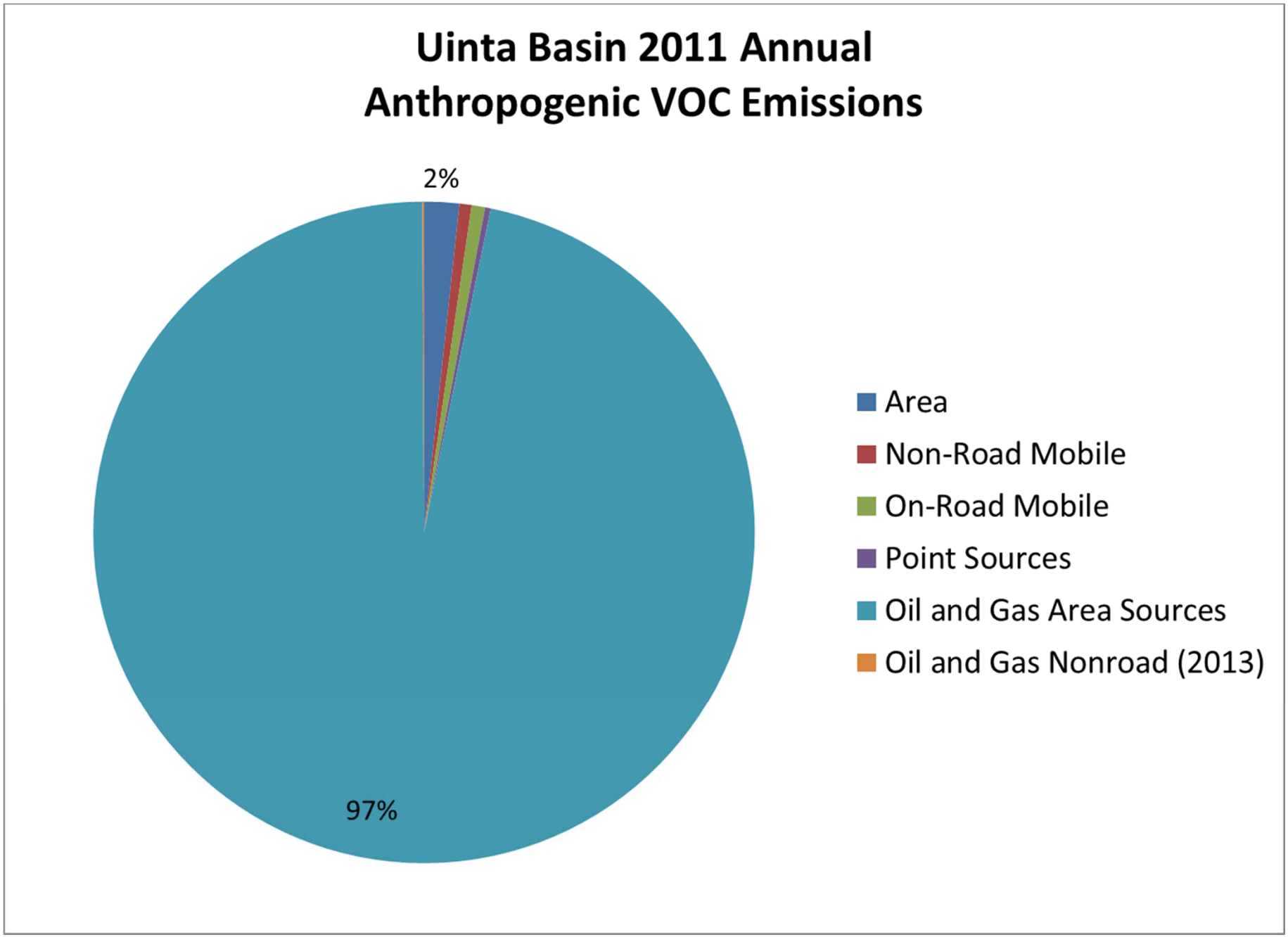


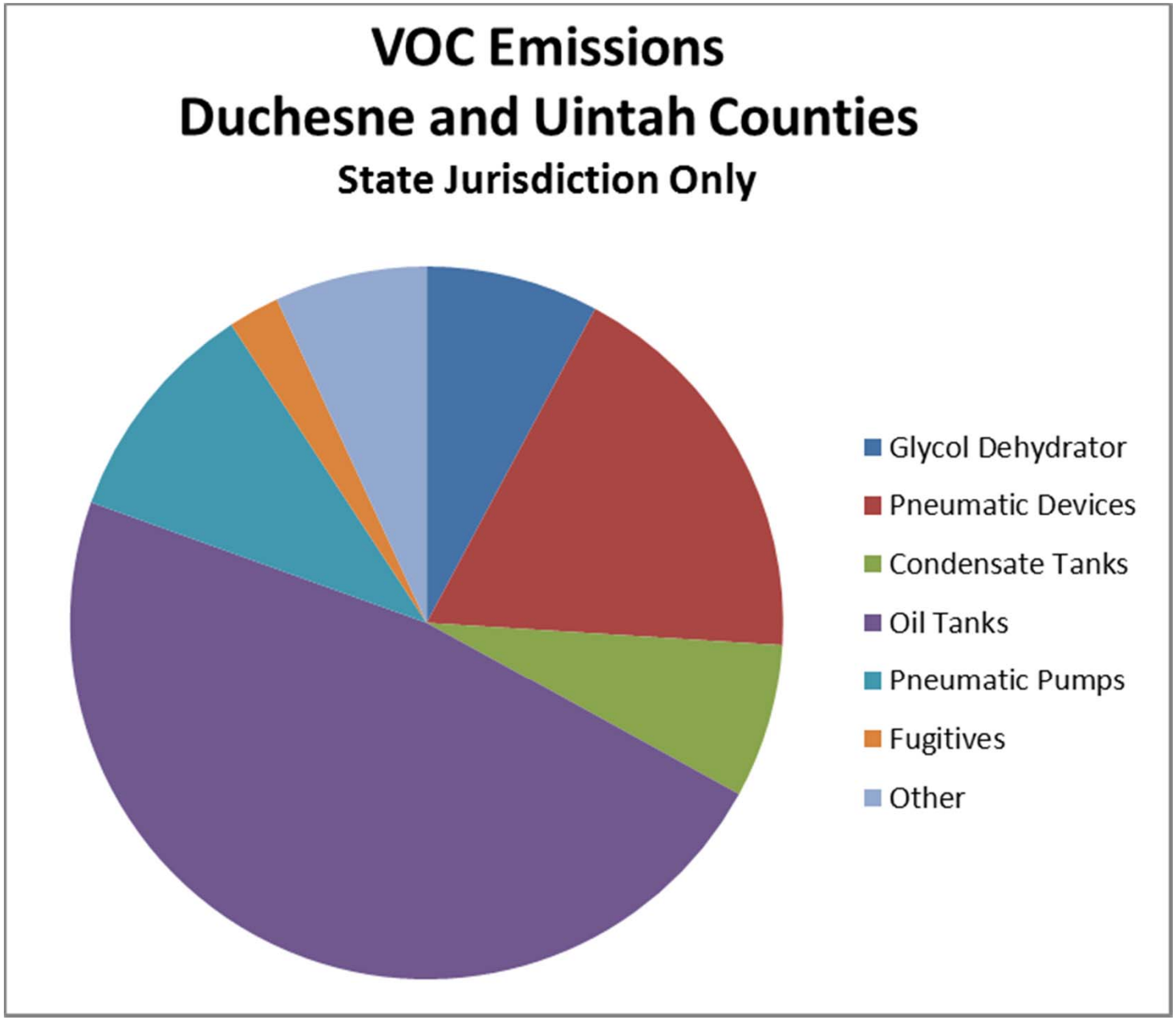
Source: EPA AirData

Ozone

- Statewide – Summertime Ozone
  - EPA expected to propose tighter standard in December 2014
- Uinta Basin - Wintertime Ozone
  - Occurs during temperature inversions when there is snow on the ground
  - Extensive research since 2010
    - VOC reductions are most likely to reduce ozone
  - DAQ focus
    - Research, emission inventory, modeling development to ensure that ozone formation is understood and strategies are effective
    - Permitting
      - Ensure new sources are well controlled
      - Existing sources above permitting thresholds required to have an approval order
    - Emission reductions from existing, legacy equipment that is not well controlled
    - Retrofit rules, first round
      - Cost effective
      - Ensure existing equipment is operating as designed
      - Comments received through stakeholder process prior to proposal
    - Additional retrofit strategies through Ozone Advance Program


Utah Statewide 2011 Annual Anthropogenic VOC Emissions
0%
22%
10%
11%
3%
54%
Area
Non-Road Mobile
On-Road Mobile
Point Sources
Oil and Gas Area Sources
Oil and Gas Nonroad (2013)

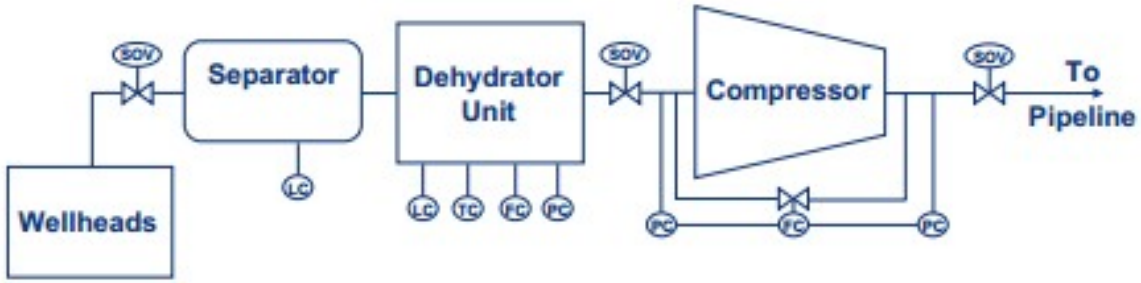

Uinta Basin 2011 Annual
Anthropogenic VOC Emissions
2%
97%
Area
Non-Road Mobile
On-Road Mobile
Point Sources
Oil and Gas Area Sources
Oil and Gas Nonroad (2013)


VOC Emissions
Duchesne and Uintah Counties
State Jurisdiction Only
Glycol Dehydrator
Pneumatic Devices
Condensate Tanks
Oil Tanks
Pneumatic Pumps
Fugitives
Other

Proposed Oil and Gas Rules

- R307-501 General Provisions
  - VOC emissions minimized
  - Equipment must be properly maintained and operated
  - Equipment sized properly
- R307-502 Pneumatic Controllers
  - Accelerate implementation of NSPS standards
  - Replace high-bleed controllers with low-bleed or no-bleed controllers
    - December 1, 2015 in Uinta Basin
    - April 1, 2017 statewide
  - Controllers pay for themselves in 1 ½ - 2 years in most cases
  - Estimated emission reduction 3,716 tons VOC/yr statewide

Location of Pneumatic Devices at Production Sites



SOV = Shut-off valve (Unit isolation)
LC = Level control (Separator, contactor, flash tank separator, TEG regenerator)
TC = Temperature control (Regenerator fuel gas)
FC = Flow control (TEG circulation, compressor bypass)
PC = Pressure control (FTS pressure, compressor suction/discharge)

Low and No-bleed Pneumatic Valves

Examples of Electric-Actuated Valves

Proposed Oil and Gas Rules

- R307-503 Flares
  - Require all new flares to be equipped with an automatic igniter
  - Require existing flares to be retrofit
    - December 1, 2015 Uinta Basin
    - April 1, 2017 statewide
  - Estimated cost $302/ton VOC reduced
- R307-504 Tank Truck Loading
  - Require bottom filling or submerged pipe filling

Bottom or Submerged Filling

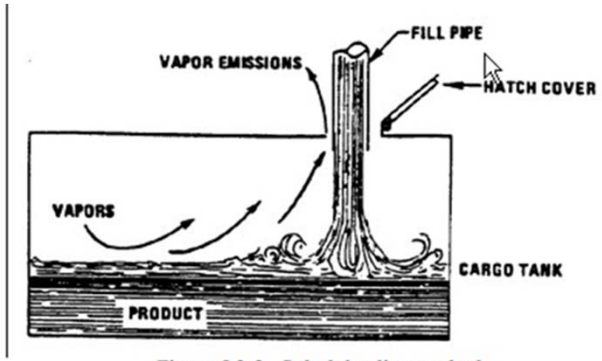


Figure 5.2-2. Splash loading method.

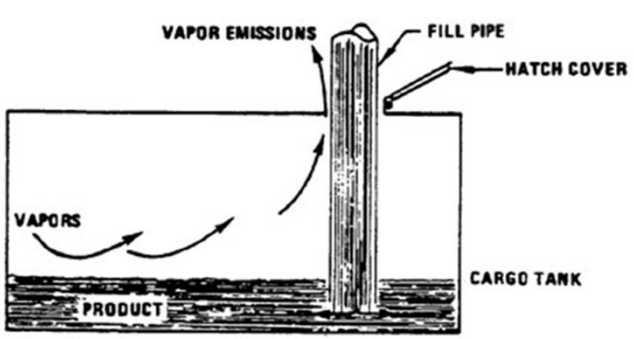


Figure 5.2-3. Submerged fill pipe.

- Condensate, oil, and produced water are collected at many oil or gas well sites
- Splash loading of tanker trucks churns the liquid, increasing VOC emissions
- Bottom filling or submerged loading of tank trucks reduces loading loss by about 59% when compared to splash loading (AP-42, page 5.2-4)
  - Inexpensive retrofit
  - Currently required in UDAQ approval orders

ITEM 6

Smoke is in Your Eyes.

RALPH BECKER
Mayor

Talking Points: Air Quality Board: June 4, 2014
Tyler Poulson on behalf of Mayor Ralph Becker

- Along the Wasatch Front, wood smoke plays a strikingly large role in its contributions to particulate pollution during inversions. Recent research from Dr. Kerry Kelly at the University of Utah indicated that a large proportion of particulate pollution during high-pollution days came from wood smoke. A threat that significant needs to be met with a similarly significant policy response.
-

Research indicates that wood smoke is more dangerous than other particulates due to the toxic chemicals it contains. During inversions, this pollution pools within neighborhoods and enters homes, affecting their air quality. Our citizens have a right to be comfortable and safe in their homes and yards and not have wood smoke threatening their health.

- To that end, Salt Lake City commends recent efforts by DAQ to examine solutions to the harm caused by wood smoke. **'Salt Lake City can lead by assisting residents in transitioning** away from residential solid fuel stoves and towards cleaner options. This, along with shrinking the sole-source list and ramping up enforcement, represent a sensible start for limiting wood smoke. Along those same lines, the City would encourage new, creative ways for DAQ to involve citizens in the compliance process. Enhancing the Utah Air mobile app to include an incident reporting mechanism would be a welcome way to enhance participation on this issue.

- Salt Lake City also supports better understanding and action on *non-residential* wood smoke. In addition to using chemical signatures to identify the ultimate source of such smoke, the City would support DAQ creating a registry that requires commercial and industrial wood burning operations to document related activity. This step would greatly increase our understanding of the sources of wood smoke and help inform future efforts.

- DAQ held a workshop earlier this week to investigate expanding the no-burn restriction to commercial and industrial non-food preparing functions in non-attainment counties. This step seems like a reasonable complement to the existing no-burn restrictions for residential addresses and the City looks forward to the opportunity to review and comment on a draft proposal.

- In closing, Salt Lake City joins DAQ in your concern regarding wood smoke and the imbalanced role it plays in creating particulate pollution to Utah's airsheds. We commend the efforts underway, but feel much more needs to be done to truly mitigate the threat we face. Expanding your concern and regulatory efforts to wood smoke burning beyond the residential sector is an excellent start. Please let Salt Lake City, and other cities in the region, know how we might help you to eliminate this source of pollution in our valley.

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P.O. Box 145474
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EPA Radon Rulemaking – Uranium Watch

ENVIRONMENTAL PROTECTION AGENCY PROPOSED RULE: 40 C.F.R. PART 61 SUBPART W

Impact of Rule on White Mesa Uranium Mill and Division of Air Quality Regulatory Program

Sarah Fields
Program Director
Uranium Watch
PO Box 344
Moab, Utah 84532
435-260-8384

EPA PROPOSED RULE
RADON EMISSIONS FROM URANIUM MILLS

WHITE MESA MILL

San Juan County, Utah

White Mesa Mill — Aerial View

Cells 4A and 4B and Cell 1 — Liquid Effluent (Blue)
Cells 2 and 3 Between

EPA Proposed Rule: Revisions to National Emission Standards for Radon Emissions From Operating Mill Tailings

- Division of Air Quality administers and enforces Subpart W.
- Subpart W Rule change significantly impacts White Mesa Mill.
- Current regulations: Radon emission standard for "existing" impoundments—Cells 2 and 3. Requires annual monitoring and reporting of radon flux. Standard is 20 pCi/m^2-sec.
- New Impoundments—Cells 4A and 4B. No monitoring. 40-acre cells and phased disposal. Cell 4A receiving tailings, 4B fluids.
- Proposed rule removes requirement for any radon monitoring.

EPA Justification for Removing Radon Flux Monitoring Requirement

- EPA: Shootaring Mill and Sweetwater Mill impoundments have synthetic liner.
- EPA: White Mesa Cell 2 is not an "existing impoundment" and White Mesa Cell 3 will "close" by end of 2014.
- EPA: Therefore, "existing" impoundments in Utah and Wyoming meet the standard for "new" impoundments.
- Proposed rule removes requirement for any radon monitoring.
- FACT: Shootaring Mill impoundment has clay liner, and Cells 2 and 3 are still "existing" impoundments.

White Mesa Mill — Aerial View

Cell 1 Liquid Effluent Pond and Cell 3 Liquids (Black) and Cells 2 and 4A Impoundments

Concerns about Proposed EPA Rule

- Cell 2 exceeded radon flux standard in 2012.
- Licensee commenced monthly monitoring and reporting and investigation of cause of radon-emission increase.
- Cause was accelerated dewatering under Ground Water Discharge Permit requirements and windblown tailing from Cell 3.
- Additional fill placed on impoundment and windblown tailings cleaned up, bringing radon flux into compliance.
- Cells 2 and 3 are still "existing" impoundments.

Concerns about Proposed EPA Rule — Cont.

- Under new rules: no radon flux standard, no monitoring, no reporting, no need to take action to reduce radon emissions.
- Experience with Cell 2 demonstrates need for continued radon monitoring after impoundment no longer receives tailings.
- Without monitoring, no one will know that radon emissions have increased and corrective actions should be undertaken.
- No requirement to monitor radon from new impoundments (constructed after 1989). Cells 4A and 4B are "new" cells.
- No requirement to monitor radon during "closure," when tailings impoundments dry out and radon emissions increase.

Utah Should Not Support Rule Changes

- Radon flux standard for existing impoundments should be retained. Monitoring important to control of emissions.
- Radon from newer, 40-acre cells should also be monitored.
- Radon should be monitored during closure period, until placement of final radon barrier. This regulatory gap should be filled.
- The only way to assure that radon emissions are as low as reasonably achievable is through monitoring, reporting, and corrective actions when radon emissions exceed standard.
- Other legal, factual, and regulatory issues.

Additional Information

- EPA Subpart W Rulemaking Website: http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html
- Comments on Proposed Rule Due July 31, 2014.
- EPA Conference Call: July 3, 9 am MDT. See EPA Website.
- Uranium Watch: www.uraniumwatch.org and sarah@uraniumwatch.org

Uranium Watch

76 South Main Street, # 7 | P.O. Box 344
Moab, Utah 84532
435-260-8384

May 23, 2014

Mr. Bryce Bird
Director
Utah Division of Air Quality
P.O. Box 144820
Salt Lake City, Utah 84114-4820

RE: Uranium Watch Presentation at the June 4, 2014, Air Quality Board Meeting

Dear Mr. Bird:

Attached please find written presentation to distribute to the Air Quality Board for the June 4, 2014, Board Meeting.

This information is also for the Division staff to consider in making comments on the Environmental Protection Agency 40 C.F.R. Part 61, Subpart W rulemaking. Comments are due July 31, 2014. 79 Fed. Reg. 25388, May 2, 2014.

Please let me know if you have any questions or comments.

Thank you for this opportunity to appear before the Board.

Sincerely,

Sarah Fields
Program Director
sarah@uraniumwatch.org

Enclosure: As stated

URANIUM WATCH
PRESENTATION TO UTAH AIR QUALITY BOARD
JUNE 4, 2014

The purpose of the presentation before the Utah Air Quality Board is to bring to the attention of the Board and the Division of Air Quality staff the proposed Environmental Protection Agency (EPA) Revisions to National Emission Standards for Radon Emissions From Operating Mill Tailings (40 C.F.R. Part 61 Subpart W).[1] The Division of Air Quality (DAQ) administers and enforces these regulations, which are currently applicable to two uranium mills in Utah: White Mesa (San Juan County) and Shootaring Canyon (Garfield County). Only the White Mesa Mill is in operation—the only operating conventional uranium mill in the United States.

Uranium Watch has a number of concerns about the proposed regulations and how those regulations will impact the White Mesa Mill, south of Blanding, and the nearby White Mesa Band of the Ute Mt. Ute tribe and other citizens of San Juan County. There are factual, legal, and regulatory concerns.

The primary concern is that, under new regulations, the DAQ and EPA will allow the indefinite, unfettered, unmonitored, unreported, unmitigated release of radon emissions from the 2 larger tailings impoundments at the White Mesa Mill, Cells 2 and 3, and from any newer tailings impoundments.

WHITE MESA MILL

Below is a table showing the tailings impoundments that contain, or were designed to contain, solid tailings. The other impoundments, Cell 1 and Robert's Pond, contain liquid effluents.

White Mesa Mill Tailings Impoundments and Subpart W Requirement		
Regulation	**Impoundment**	**Applicable Provisions**
40 C.F.R. § 61.252(a)	Cells 2 and 3	Radon-222 emissions from an existing tailings pile shall not exceed 20 pCi/ (m^2-sec).
40 C.F.R. § 61.252(b)	Cell 4A and 4B	Phased disposal in lined tailings impoundments no more than 40 acres in area and meet the requirements of 40 CFR 192.32(a).

[1] 79 Fed. Reg. 25388, May 2, 2014. http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html

The current National Emission Standards for Hazards Air Pollutants (NESHAPS) applicable to radon emissions from uranium mill tailings were promulgated on December 15, 1989.[2] The radon flux standard at Section 61.252(a) applies to "an existing uranium tailings pile." Section 61.251(d) defines "existing impoundment": "Existing impoundment means any uranium mill tailings impoundment which is licensed to accept additional tailings and is in existence as of December 15, 1989." [3]

Tailings Cells 2 and 3 are existing tailings piles because they are licensed to accept additional tailings[4] and were in existence as of December 15, 1989. Recently reconstructed or reconstructed Cells 4A and 4B are subject to the newer design and work practice standard.[5] White Mesa uses phased disposal in a 40-acre impoundment for new impoundments.

The regulations require the annual reporting of the radon flux from Cells 2 and 3. The licensee submits those reports to the DAQ and EPA. According to Subpart W, if the facility is not in compliance with the emission limits of §61.252 in the calendar year covered by the report, then the facility must commence monitoring and reporting on a monthly basis.[6] The licensee must also report the controls and actions taken to bring the facility back into compliance.

In 2012 Cell 2 exceeded the 20 pCi/m^2-sec radon flux standard,[7] and monthly monitoring and reporting commenced in April 2013. The licensee, Energy Fuels Resources (USA) Inc., determined that the increase in radon emissions was caused by the dewatering of the impoundment, pursuant to the Ground Water Discharge Permit. Removing water from the impoundment reduces the potential for leakage of tailings fluids into the ground water. Dewatering is also necessary before the placement of the final radon barrier. The licensee also discovered windblown tailings from Cell 3 and higher levels of radon emissions in areas where tailings from the processing of uranium bearing wastes (not ore) at the mill. Over the next year the licensee took actions to bring Cell 2 back into compliance with the radon-222 limit, which were successful.

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[2] 54 Fed. Reg. 51654, December 15, 1989. http://www.epa.gov/radiation/docs/neshaps/subpart-w/historical-rulemakings/december151989finalrule.pdf

[3] 40 C.F.R. § 61.251(d).

[4] Radioactive Materials License UT1900479; Ground Water Discharge Permit UGW370004. http://www.radiationcontrol.utah.gov/Uranium_Mills/denison/index.htm

[5] 40 C.F.R. § 61.252(b).

[6] 40 C.F.R. § 61.254(b)

[7] http://www.uraniumwatch.org/whitemesamill/EFR-DAQ_SupartWAnnualRpt.130329.pdf

EPA PROPOSED REVISIONS

The EPA proposes to eliminate the the requirement for radon flux monitoring at existing tailings impoundments. This change specifically impacts the White Mesa Mill and Cells 2 and 3. The EPA justifies this major revision by the following assumptions:

- EPA claims there will soon be only 2 "existing" tailings impoundments: Shootaring Canyon Mill and Sweetwater Mill (Wyoming). Both impoundments are less than 40 acres and both have a synthetic liner, therefore meet the design requirements in 40 C.F.R. § 192.32(a).

- EPA does not consider Cell 2 to be an "existing" tailings impoundment.

- Cell 3 will "close" at the end of 2014, so will no longer be an "existing" impoundment.

However, EPA's claims and assumptions are not supported by the facts:

- The Shootaring Canyon tailings impoundment does not have a synthetic liner, it has a clay liner.[8]

- Cell 2 meets the "existing impoundment" definition. Cell 2 was constructed prior to 1989 and is licensed to receive tailings. Energy Fuels states in the Annual Subpart W Compliance Report that Cell 2 is an existing impoundment and subject to the radon flux standard;[9] the DAQ and EPA have not claimed otherwise. There is no approved closure plan in the license and no reclamation milestones for Cell 2. The dewatering took place under GWDP requirements, not part of the closure plan. There is no dewatering milestone, as required by EPA and DRC regulations, for impoundments in closure.

- EPA claims Cell 3 will be "closed" by the end of 2014. But, it will still meet the definition of an existing impoundment, because it was constructed before 1989 and is licensed to receive tailings under the DRC license and GWDP.

- For Cells 2 and 3 to no longer meet the current definition of "existing" impoundment, the licenses must be amended to remove the authorization to dispose of tailings or any 11e.(2) byproduct material in those cells. The license must be amended to include an approved closure plan for the cells and enforceable reclamation milestones. The GWDP must also be amended to remove any authorization to dispose of materials in these impoundments. These application and approval processes take time. These licensing actions are up to Energy Fuels, the DRC, and the public—not the EPA.

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[8] Tailings Reclamation and Decommissioning Plan for Shootaring Canyon Uranium Project, Garfield County, Utah. License Number SUA-1371 (NRC); UT 0900480 (DAQ). Hydro-Engineering LLC, Environmental Restoration Inc. And, John Hulquist, Division of Radiation Control, electronic communication, May 20, 2014.

[9] http://www.uraniumwatch.org/whitemesamill/EFR-DAQ_SupartWAnnualRpt.130329.pdf

CONCERNS

The experience with Cell 2 over the past year, demonstrates the need for annual radon flux monitoring at both Cell 2 and Cell 3 and the continuation of that monitoring during the dewatering process. The ponded water and water in the tailings must be removed so that the interim cover and then the final radon barrier can be placed on the tailings impoundment. Dewatering also reduces the potential for leakage of tailings effluents into the groundwater. It can take decades to reduce the moisture in the tailings in preparation for the final radon barrier. If the radon emissions are not regulated throughout this dewatering process, radon emissions will not be controlled.

Although Cell 2 radon emissions increased, it was feasible to bring those emissions under control with additional soil cover and cleanup of windblown tailings. Under proposed EPA regulations, Cell 2 will no longer be monitored and Cell 3 will not be monitored as the impoundment dries out and radon emissions increase.

Another concern is that when the newer cells dry out from natural evaporation or with active dewatering, radon emissions will increase, but the emissions will go unmonitored, unreported, and unregulated for an indefinite period of time. So, the radon emissions from newer tailings impoundments must also be monitored and minimized until placement of the final radon barrier.

LEGAL ISSUES

Subpart W is being amended under Section 112 of the 1990 Clean Air Act (CAA). The EPA has determined that, since uranium mills are considered "area" sources, rather than "major" sources under the CAA, the EPA can rely on Section 112(d)(5) and promulgate standards that rely the use of generally available control technologies or management practices, rather than an emissions standard.

However, Section 112(h) states that design, equipment, work practice, or operational standard cannot be established unless it is not feasible to prescribe or enforce an emission standard for control of a hazardous air pollutant. For radon emissions, not feasible, would mean the application of measurement methodology is not practicable due to technological and economic limitations. For over 25 years the EPA or the DAQ has enforced an emission standard and there appears to be no problem with the required measurement methodology.

URANIUM WATCH PROPOSAL

1. The the EPA must maximize the control and reduction of radon emissions at uranium mills, not de-regulate such emissions, as proposed.

2. The EPA must use the maximum achievable control technology (MACT), rather than the less rigorous and protective generally available control technology or management

practices (GACT), under section 112(d) of the CAA.

3. Section 61.252(a) and regulations associated with the monitoring and control of radon emissions from existing tailings impoundments must be retained in Subpart W.

4. Subpart W must be amended so that Section 61.252(a) applies to existing tailings impoundments throughout the period of drying and dewatering before placement of the final radon barrier.

5. Subpart W must apply the requirements of Section 61 emission standard and monitoring and reporting requirements to new tailings impoundments. Under the current and proposed provisions for new impoundments, there is no requirement in Subpart W for any measures to reduce radon emissions, such as the placement of an interim soil cover, over any portion of a 40-acre tailings impoundment, during or after operation of the impoundment.

6. The EPA must also regulate, through requirements for monitoring, reporting, and corrective actions, the radon emissions from ore pads and stockpiled ore at conventional mills. The EPA Background Information Document[10] for the proposed rule states that the radon emissions from White Mesa ore pads are far higher than those from a tailing impoundment. The EPA Risk Assessment states that "the estimated annual radon release rate from the ore pads is 375 and 956 Ci/yr for Colorado Plateau and Arizona Strip ore, respectively," and that "the total annual radon release rates for active tailings cell 3 and 4A and 4B were estimated to be 179 Ci/yr for tailings cell 3 and 102 Ci/yr for each of tailings cells 4A and 4B." [11]

CONCLUSION

There are other legal, technical, and regulatory issues related to the lengthy EPA proposed Subpart W rule. The Air Quality Board and the DAQ staff must throughly review and evaluate the proposed rule and how it will impact the State of Utah and the Division's responsibility to protect the health of the citizens of Utah.

ADDITIONAL INFORMATION

EPA Subpart W Rulemaking Website:
http://www.epa.gov/radiation/neshaps/subpartw/rulemaking-activity.html

Uranium Watch: sarah@uraniumwatch.org or 435-260-8384

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[10] Risk Assessment Revision for 40 CFR Part 61 Subpart W – Radon Emissions from Operating Mill Tailings; S. Cohen & Associates. November 2011.
http://www.epa.gov/radiation/docs/neshaps/subpart-w/historical-rulemakings/subpart-w-risk.pdf

[11] Id. Page 17.

Sarah Fields
Program Director
Uranium Watch
P.O. Box 344
Moab, Utah 84532

2015 Research Program Update

Research Projects Selection and Updates

40 Suggested Projects

14 Finally Selected

Principle Investigators from:

- U of U
- WSU
- BYU
- USU & Bingham Research Center

Percent of Funding Per Project

New Mobile Monitor	5%
Toxics Monitoring & Evaluation	13%
Exceptional Events Modeling & Analysis	10%
Mobile Emissions & Analysis	14%
Uinta Basin Modeling & Inventory	26%
Wasatch Front Modeling & Inventory	20%
Great Salt Lake Ozone Monitoring	9%

Monitoring and Analysis of Observations: 41%

- New Mobile Monitor
- Toxics Monitoring & Evaluation
- Mobile Emissions & Analysis
- Great Salt Lake Ozone Monitoring

Modeling and Emissions Inventory: 56%

- Exceptional Events Modeling & Analysis
- Uinta Basin Modeling & Inventory
- Wasatch Front Modeling & Inventory

1	Final Projects for Research Funding 6/4/2014				
2	**Project**	**Wasatch Front PM2.5**	**Uinta Basin Winter ozone**	**Wasatch Front Summer ozone**	**Wasatch Front Health**
3	Portable Monitoring Trailer	X		X	X
4	Toxics Study				X
5	Exceptional events modeling - wildfire, aerosols, ozone, wind-blown dust	X		X	
6	Cold Start Emissions	X			
7	Centralize I/M databases across counties	X		X	
8	Uinta Basin Oil and Gas Emissions		X		
9	Oil & Gas Projection/Decline Curve Analysis - extension of DAQ whitepaper methodology -- UofU		X		
10	Winter ozone photochemical modeling I		X		
11	Winter ozone photochemical modeling II CB05/CB06 low temperature organic nitrate & HONO chemistry. Sole-source contract with ENVIRON	X	X	X	
12	Improve Winter Atmospheric Modeling along the Wasatch Front	X			
13	Salt Lake Valley wood burning emissions - micro-inventory	X			
14	GSL O3 Measurement Study - Summer 2015			X	
15	GSL O3 Measurement Study - Summer 2015			X	
16	GSL O3 Measurement Study - Summer 2015			X	

General Scopes of Work

Directly to Principle Investigators

Aim for Mid-July Start

Communication Strategy
Active Development - DAQ & OPPA

Utah Air Toxics Monitoring Report

Utah Air Toxics Monitoring Report

Roman Kuprov
Utah Department of Environmental Quality
Division of Air Quality
4 June 2014

Method

Gaseous HAPs

- West Valley (2000-2002)
- Bountiful (2007-2012)
- Phoenix, AZ (2007-2012)

Method

Metals

Toxics (PM_{10})

- West Valley (2000 – 2002) (tsp)
- Bountiful (2007-2012)
- Phoenix (2007-2012)

Speciation ($PM_{2.5}$)

- Lindon (2007-2012)
- Salt Lake City (Hawthorne) (2007-2012)
- Bountiful (2007-2012)

Screening Thresholds

One-in-One-Million Cancer Risk

One in 3,000 chance to be struck by lightning in the US during a lifetime.

Chronic Exposure Level

Includes sensitive groups.

Multiplied by 0.1 to account for possible compounding effects and to achieve a more conservative value.

One-in-One-Million Cancer Risk

Percent of observations above the threshold

	1,3-Butadiene	1,4-Dichlorobenzene	Acetaldehyde	Acrylonitrile	Benzene	Carbon Tetrachloride	Dichloromethane	Ethylbenzene	Ethylene Dichloride	Formaldehyde	Tetrachloroethylene
Bount.	85	23	100	13	100	100	32	36	20	100	32
West V.	74	10	100	23	100	87	6	90		100	34
Phoenix	95	84	100	20	97	100	11	75	30	100	74

Chronic Exposure Level

Percent of observations above the threshold

	1,3-Butadiene	Acetaldehyde	Acrolein	Acrylonitrile	Benzene	Dichloromethane	Formaldehyde	M/P Xylene	Propionaldehyde
Bount.	13	89	100	5	3	6	97	0	11
West V.	54	98		23	48	0	100	7	8
Phoenix	57	100	100	12	24	0	100	0	11

Metals (PM_{10})

Percent of observations above the threshold

	1/1 million		Chronic	
	Bount.	Phoenix	Bount.	Phoenix
Antimony				
Arsenic	81	87	9	8
Beryllium				
Cadmium	5	1	2	0
Chromium (VI)	5	32	0	0
Cobalt			0	
Lead			1*	0
Manganese			64	94
Nickel			1	
Selenium			0	

*Lead exceedance values are due to the outliers.

Speciation ($PM_{2.5}$)

Percent of observations above the threshold

	1/1 million			Chronic		
	Bount.	Salt Lake	Lindon	Bount.	Salt Lake	Lindon
Antimony				10	6	10
Arsenic	36	39	34	13	13	11
Cadmium	24	22	19	23	22	19
Chromium*	57	65	59	2	3	2
Cobalt				0	0	0
Lead				0	1	1
Manganese				0	0	2
Nickel				0	0	0

*Chromium speciation values refer to all chromium oxidation states.

Results

- The composition of toxics in Salt Lake Valley is very similar to other urbanized areas in the Western US.
- The majority of organic HAPs in Utah are below the chronic exposure levels. Only six have more than 5% of their measurements above the level.
- Only 11 organic HAPs have more than 5% of their measurements above the one-in-one-million threshold.
- Unusually high levels of
  - formaldehyde,
  - acetaldehyde,
  - acrylonitrile,
  - dichloromethane

  are likely associated with anthropogenic activity and need to be investigated more closely.

Air Toxics Compliance Monitoring

State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQA-376-14

M E M O R A N D U M

TO: Air Quality Board

FROM: Bryce C. Bird, Executive Secretary

DATE: May 12, 2014

SUBJECT: Air Toxics, Lead-Based Paint, and Asbestos (ATLAS) Section Compliance Activities – April 2014

MACT Compliance Inspections	0
Asbestos Demolition/Renovation NESHAP Inspections	37
Asbestos AHERA Inspections	39
Asbestos State Rules Only Inspections	8
Asbestos Notifications Accepted	200
Asbestos Telephone Calls Answered	504
Asbestos Individuals Certifications Approved/Disapproved	67/3
Asbestos Company Certifications/Re-certifications	4/2
Asbestos Alternate Work Practices Approved/Disapproved	10/0
Lead-Based Paint (LBP) Inspections	10
LBP Notifications Approved	2
LBP Telephone Calls Answered	94
LBP Letters Prepared and Mailed	82
LBP Courses Reviewed/Approved	5/5
LBP Course Audits	0
LBP Individual Certifications Approved/Disapproved	41/3

LBP Firm Certifications	18
Notices of Violation Issued	1
Compliance Advisories Issued	2
Warning Letters Issued	2
Settlement Agreements Finalized	2
Penalties Agreed to:	
Robert Trent Van Dam/Diamond Tree Experts, Inc.	$1,250.00
Randy Spiers/That Asbestos Guy	$3,281.25
	$4,531.25

State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQC-625-14

M E M O R A N D U M

TO: Air Quality Board

FROM: Bryce C. Bird, Executive Secretary

DATE: May 19, 2014

SUBJECT: Compliance Activities – April 2014

Annual Inspections Conducted:

- Major 10
- Synthetic Minor 1
- Minor 18

On-Site Stack Test Audits Conducted: 5

Stack Test Report Reviews: 13

On-Site CEM Audits Conducted: 2

Emission Reports Reviewed: 18

Temporary Relocation Requests Reviewed & Approved: 15

Fugitive Dust Control Plans Reviewed & Accepted: 111

Open Burning Permits Issued 4,030
- Online Issued 3,875
- DAQ Staff Issued 155

Soil Remediation Report Reviews: 3

[1]Miscellaneous Inspections Conducted: 4

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

Complaints Received: 24

Breakdown Reports Received:..... 1

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

Warning Letters Issued: 0

Notices of Violation Issued:..... 0

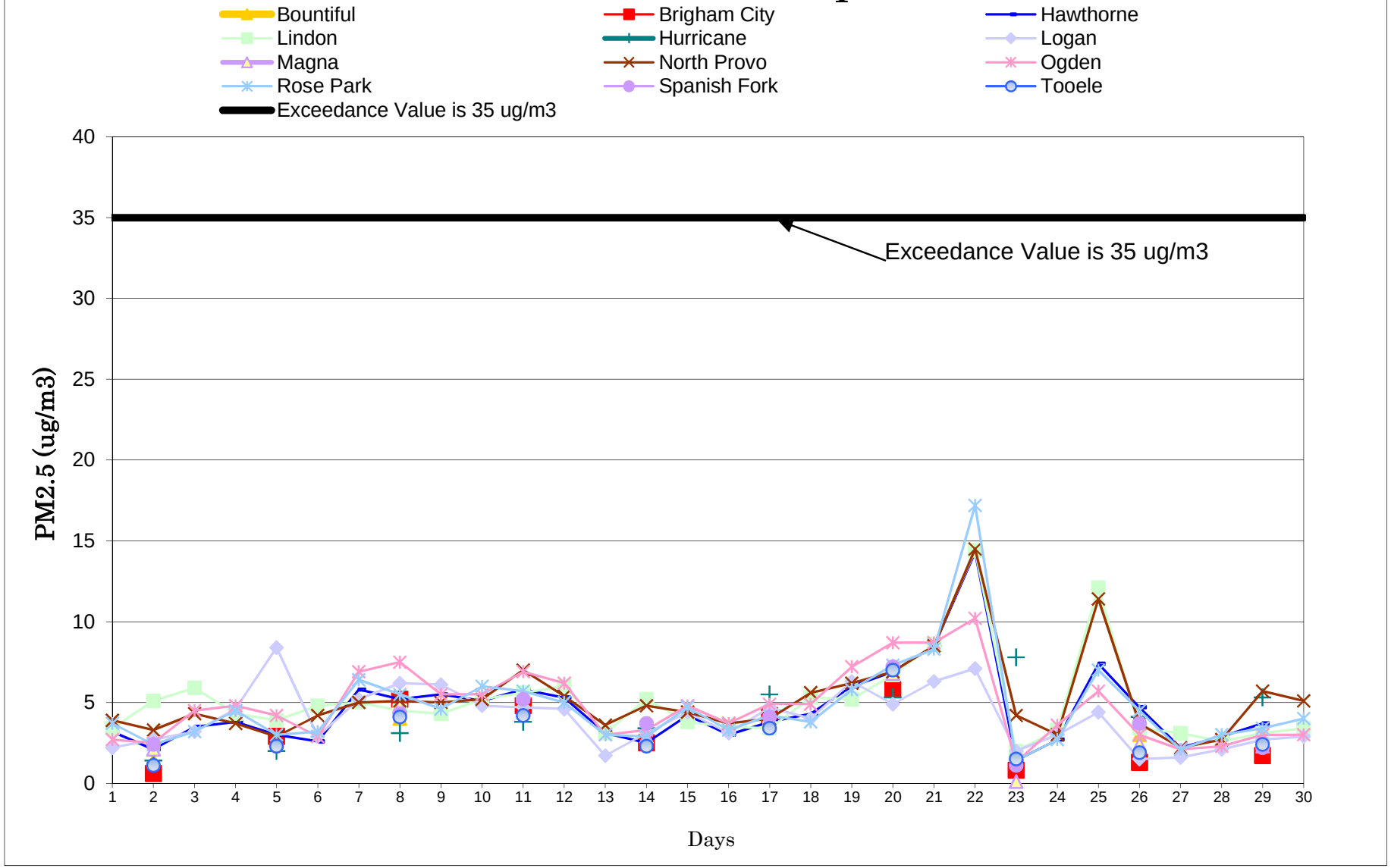
Compliance Advisories Issued:..... 0

Settlement Agreements Reached: 2

Great Salt Lake Minerals $3,695.00
Carl Hunt $448.00

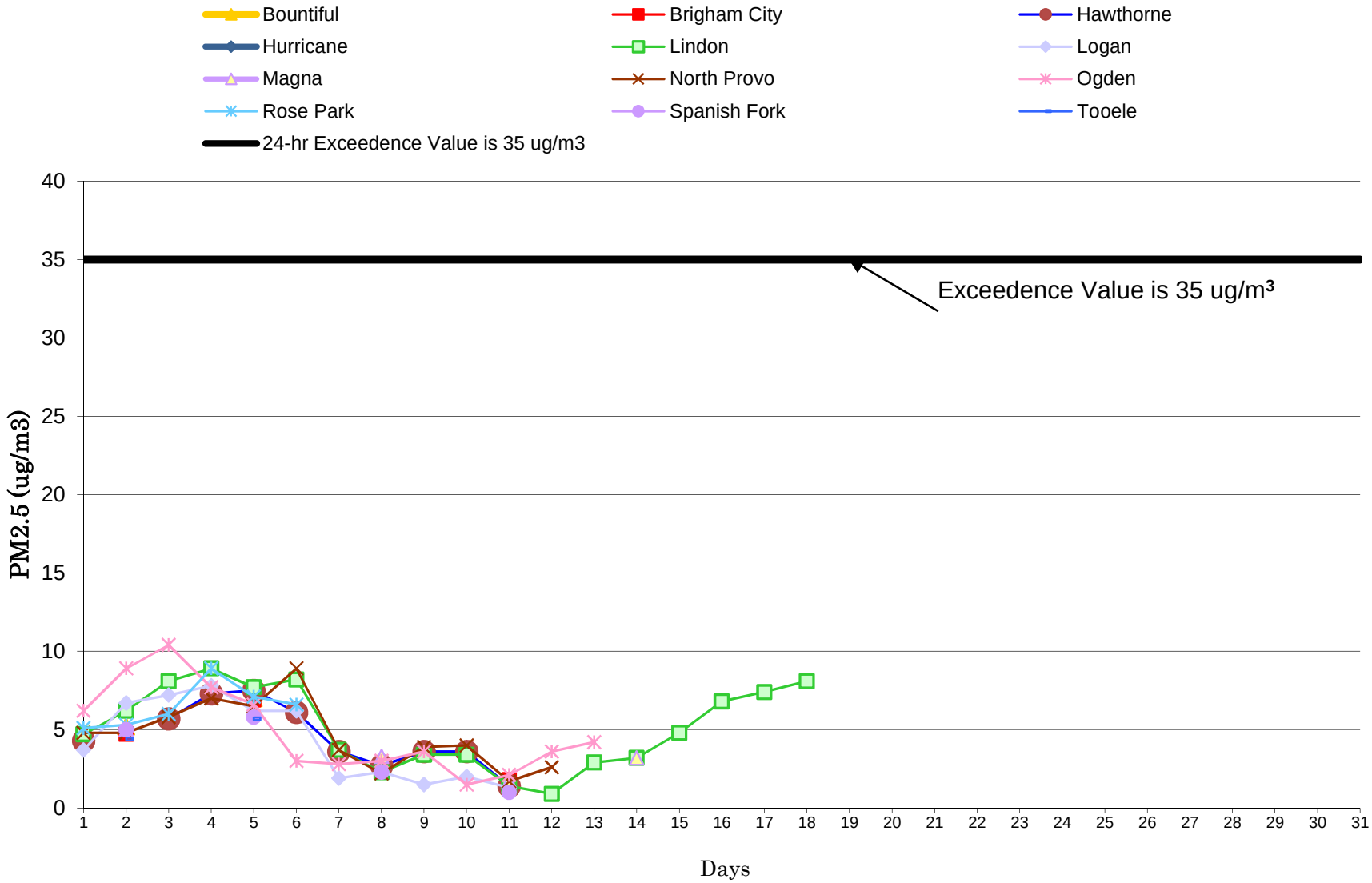
[1]Miscellaneous inspections include, e.g., surveillance, level I inspections, VOC inspections, complaints, on-site training, dust patrol, smoke patrol, open burning, etc.

Utah 24-Hr PM2.5 Data April 2014



Utah Division of Air Quality

Utah 24-Hr PM2.5 Data May 2014



Utah Division of Air Quality

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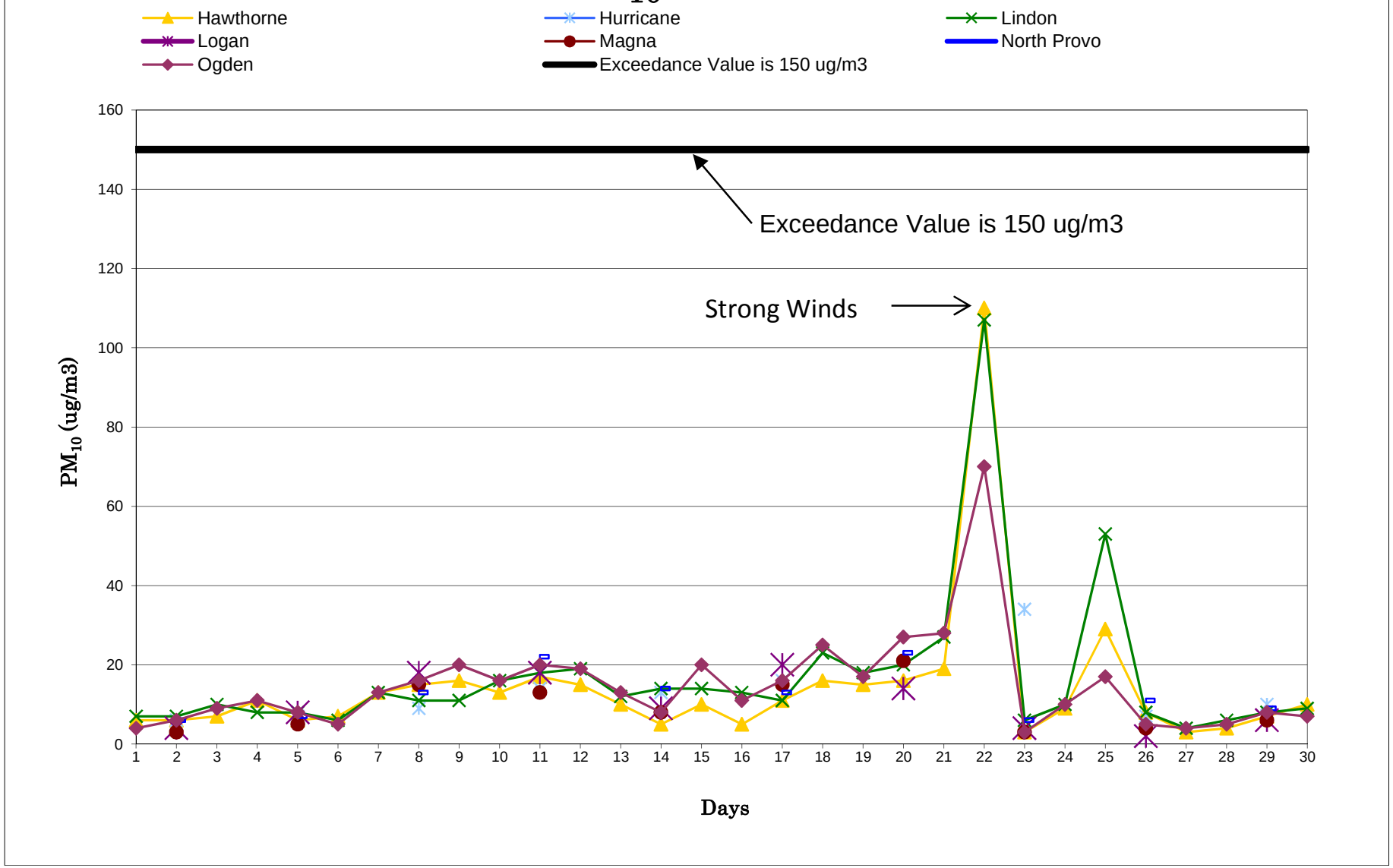
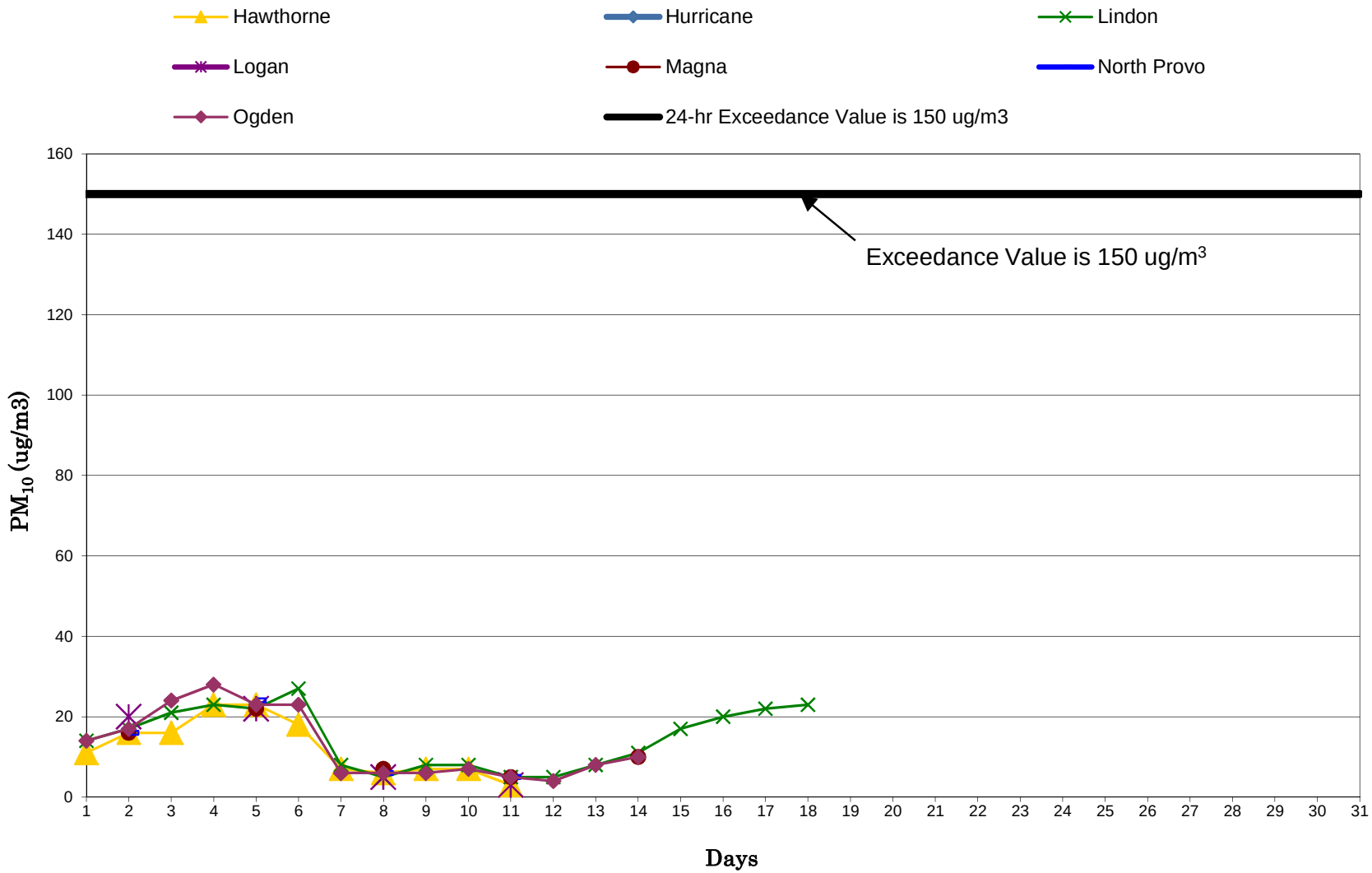


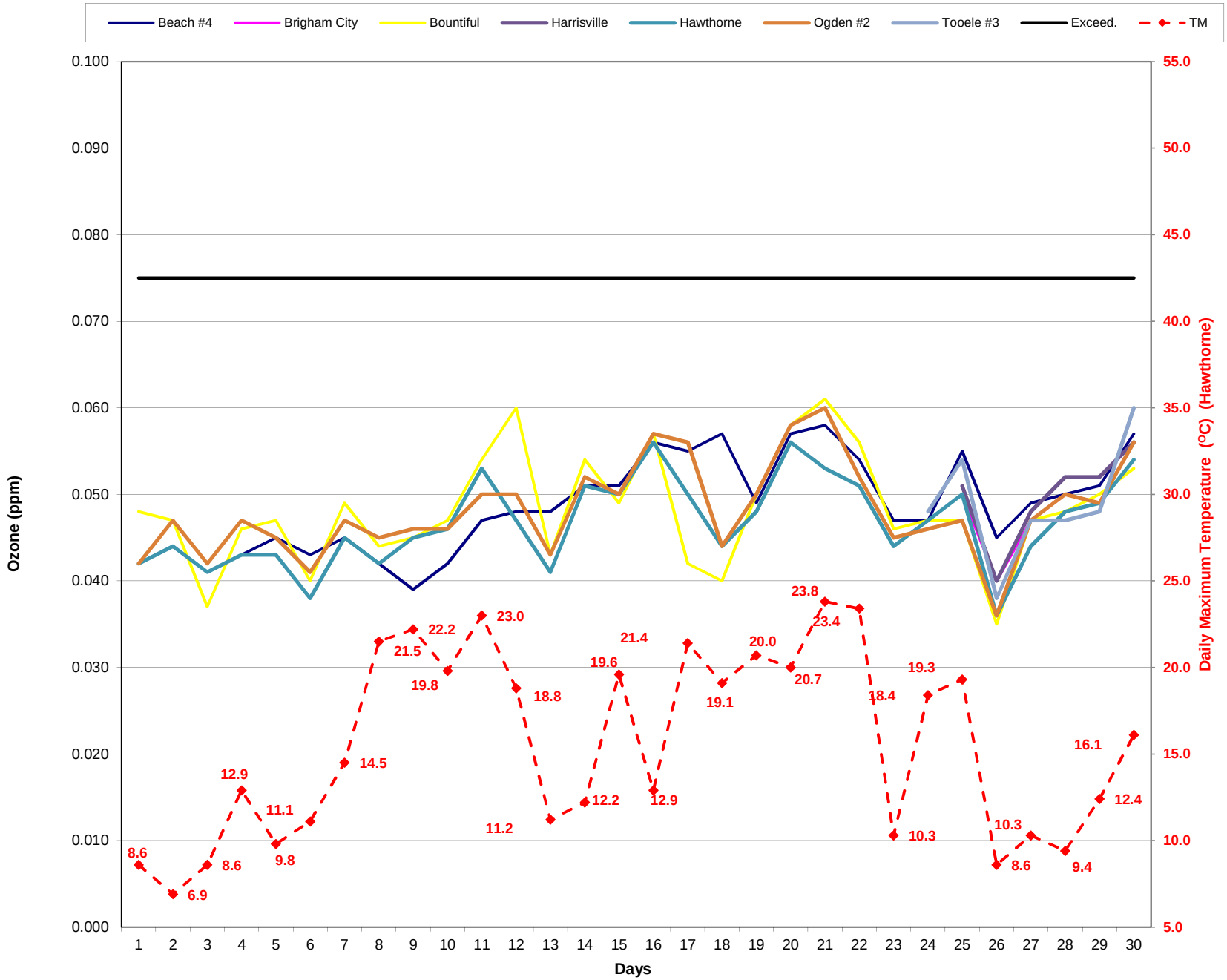
Utah Division of Air Quality

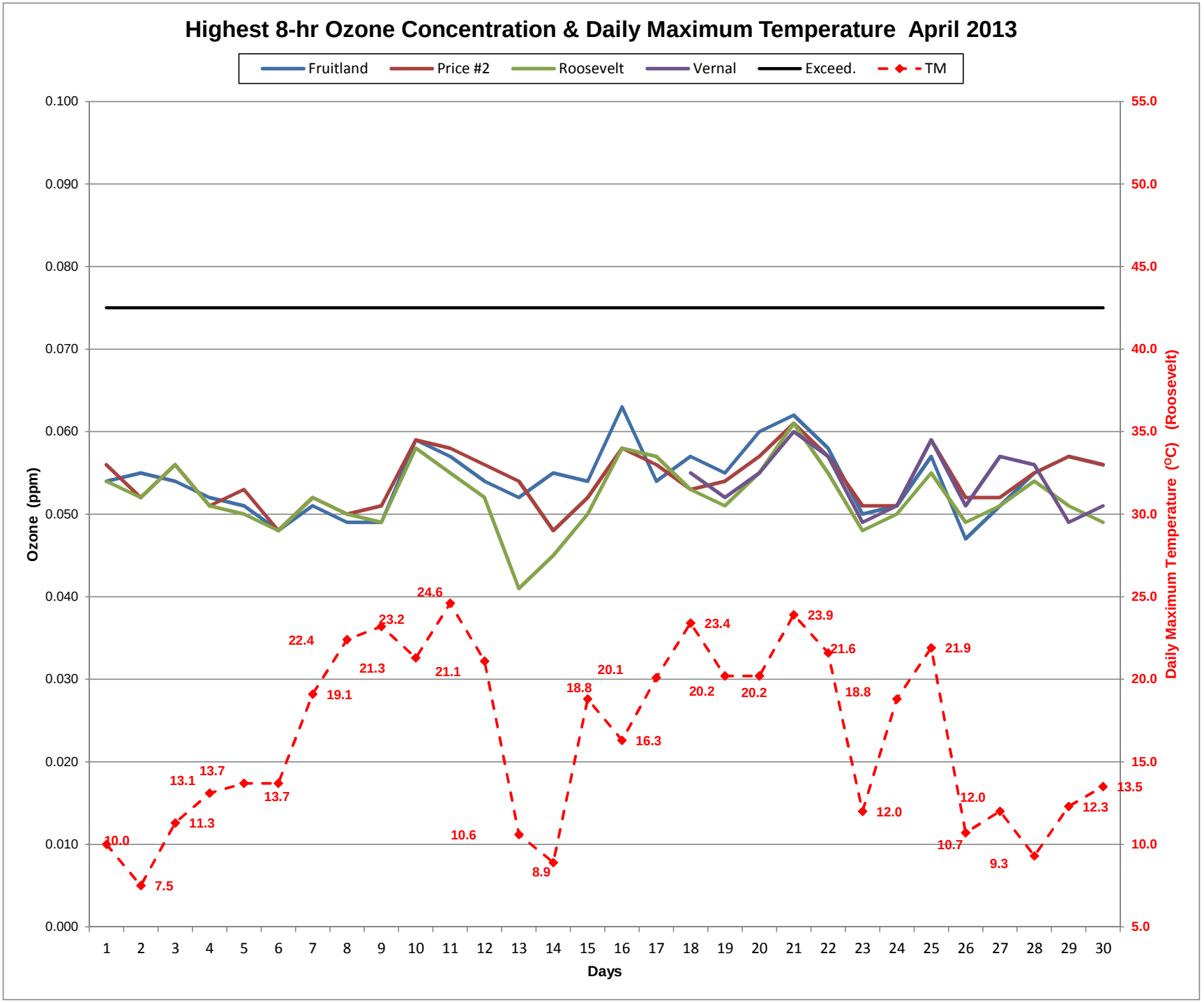
Utah 24-hr PM_{10} Data May 2014

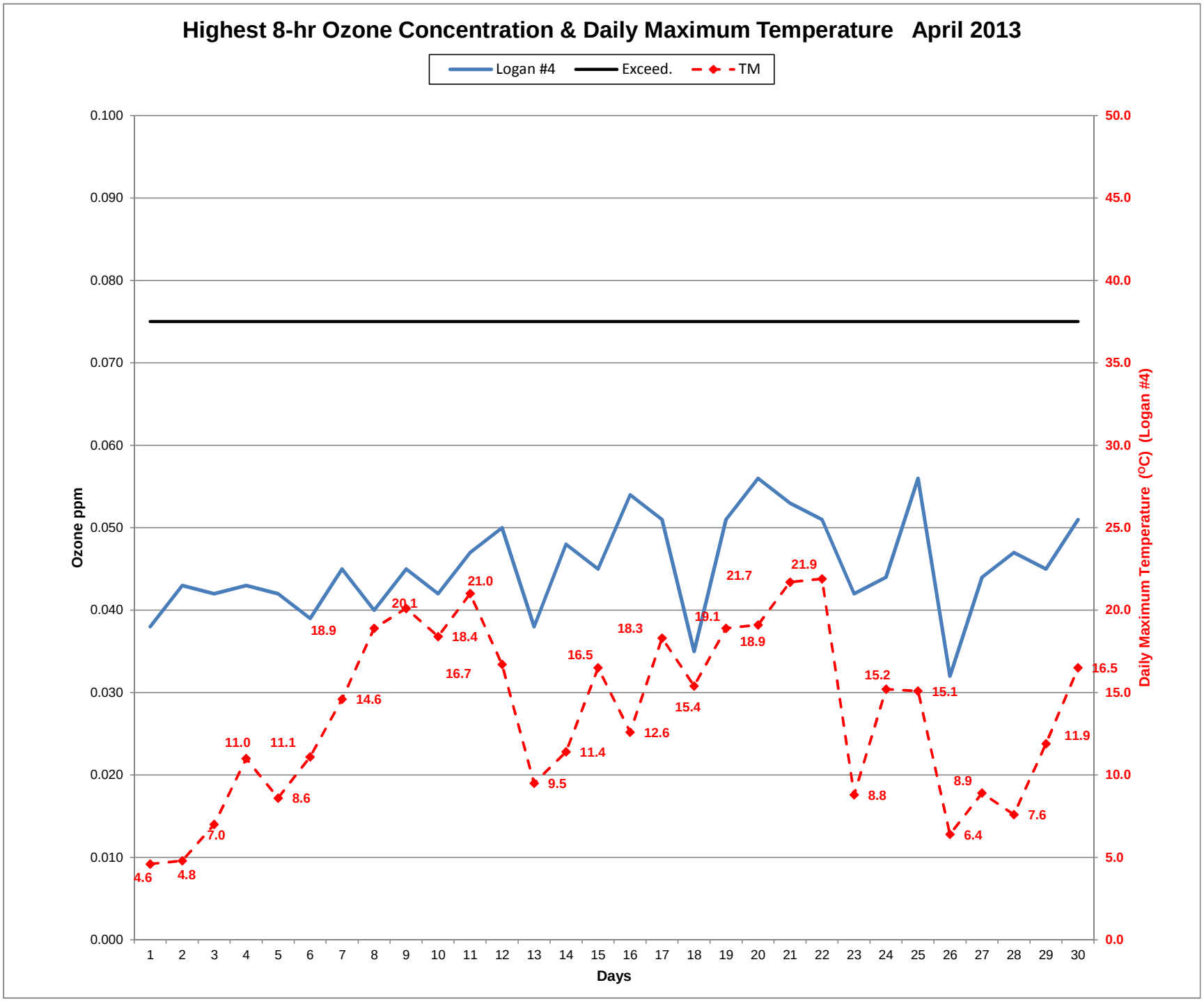


Utah Division of Air Quality

Highest 8-hr Ozone Concentration & Daily Maximum Temperature April 2013




Highest 8-hr Ozone Concentration & Daily Maximum Temperature April 2013
Fruitland
Price #2
Roosevelt
Vernal
Exceed.
TM
Ozone (ppm)
Daily Maximum Temperature (°C) (Roosevelt)
Days
0.100
0.090
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
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
10.0
7.5
13.1
11.3
13.7
13.7
22.4
19.1
21.3
23.2
24.6
21.1
10.6
8.9
18.8
20.1
16.3
20.2
23.4
20.2
23.9
21.6
18.8
12.0
21.9
10.7
12.0
9.3
12.3
13.5


Highest 8-hr Ozone Concentration & Daily Maximum Temperature April 2013
Logan #4
Exceed.
TM
Ozone ppm
Daily Maximum Temperature (°C) (Logan #4)
Days
0.100
0.090
0.080
0.070
0.060
0.050
0.040
0.030
0.020
0.010
0.000
50.0
45.0
40.0
35.0
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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
4.6
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12.6
15.4
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18.9
21.7
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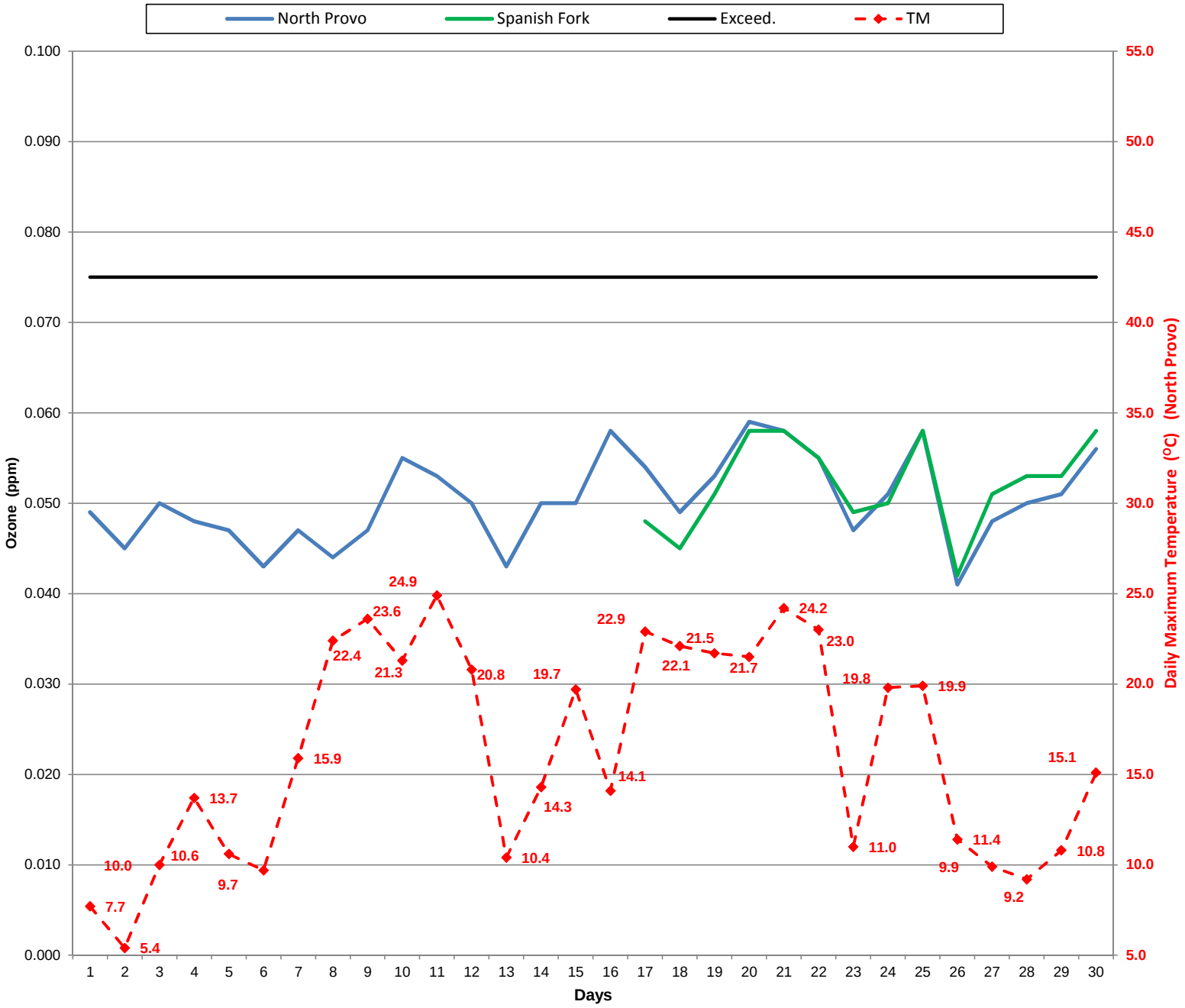
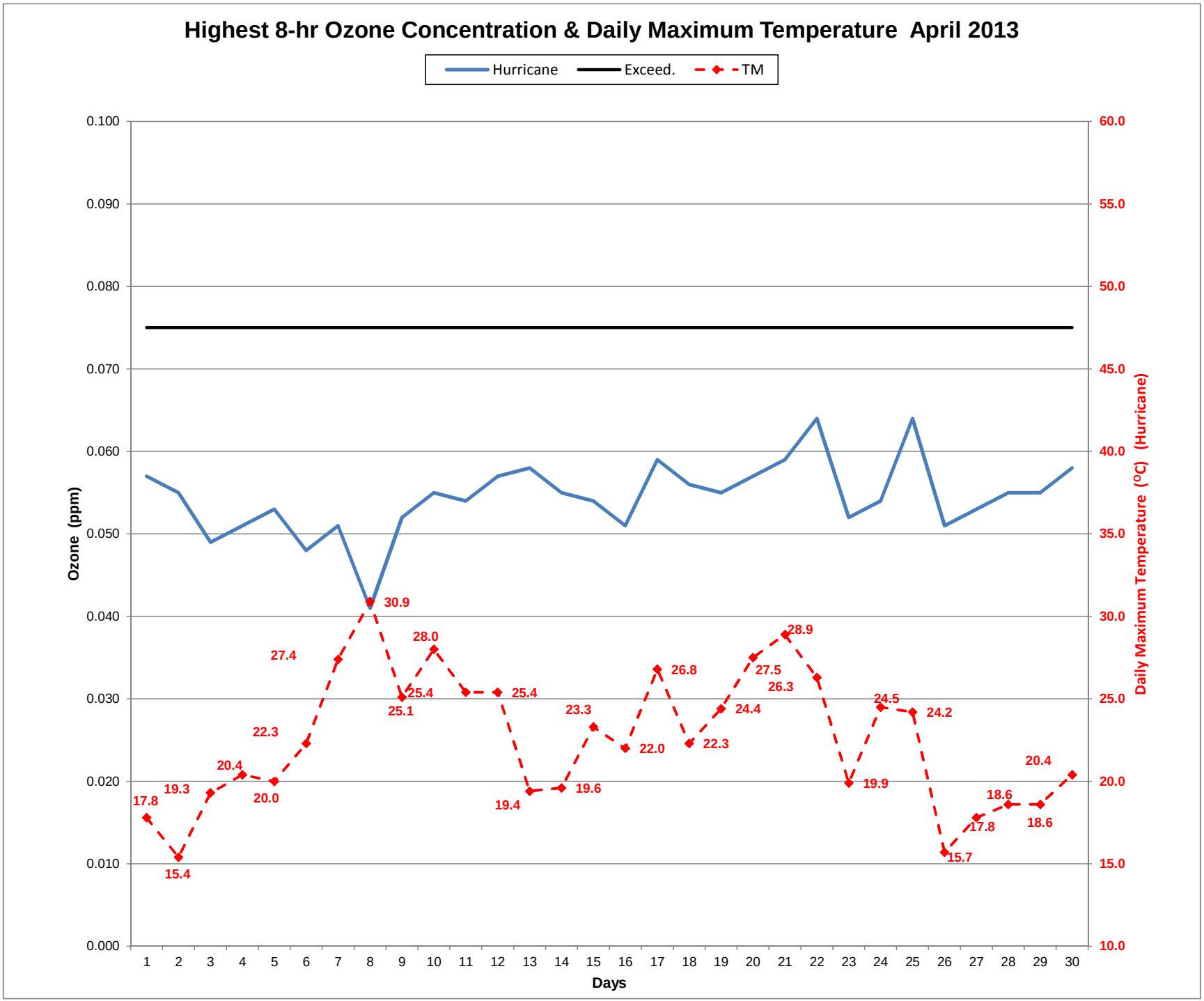
7.6
11.9
16.5

Highest 8-hr Ozone Concentration & Daily Maximum Temperature April 2013




Highest 8-hr Ozone Concentration & Daily Maximum Temperature April 2013
Hurricane
Exceed.
TM
Ozone (ppm)
Daily Maximum Temperature (°C) (Hurricane)
Days
0.100
0.090
0.080
0.070
0.060
0.050
0.040
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0.020
0.010
0.000
60.0
55.0
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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
17.8
19.3
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20.0
22.3
27.4
30.9
25.1
25.4
28.0
25.4
19.4
19.6
23.3
22.0
26.8
22.3
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26.3
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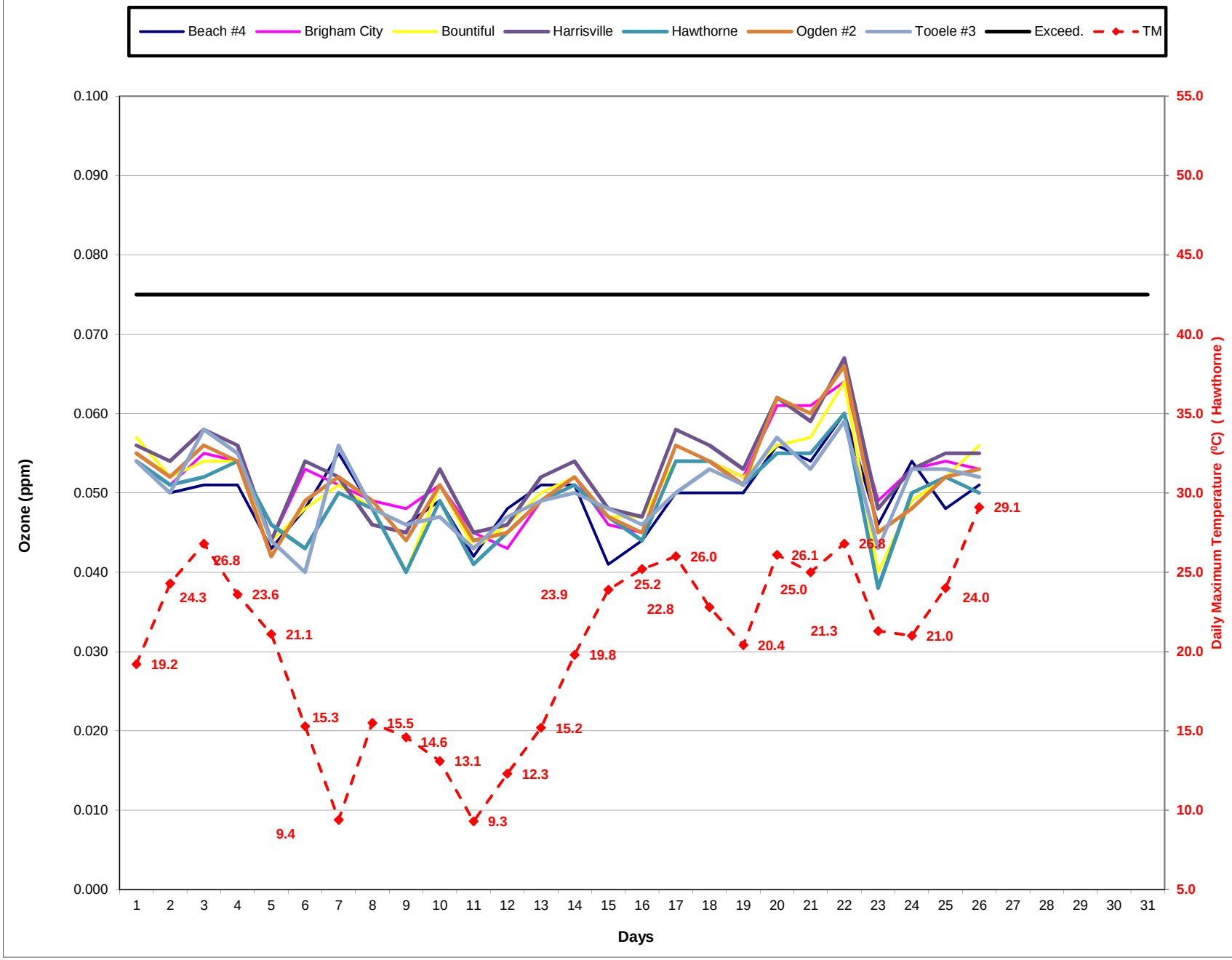
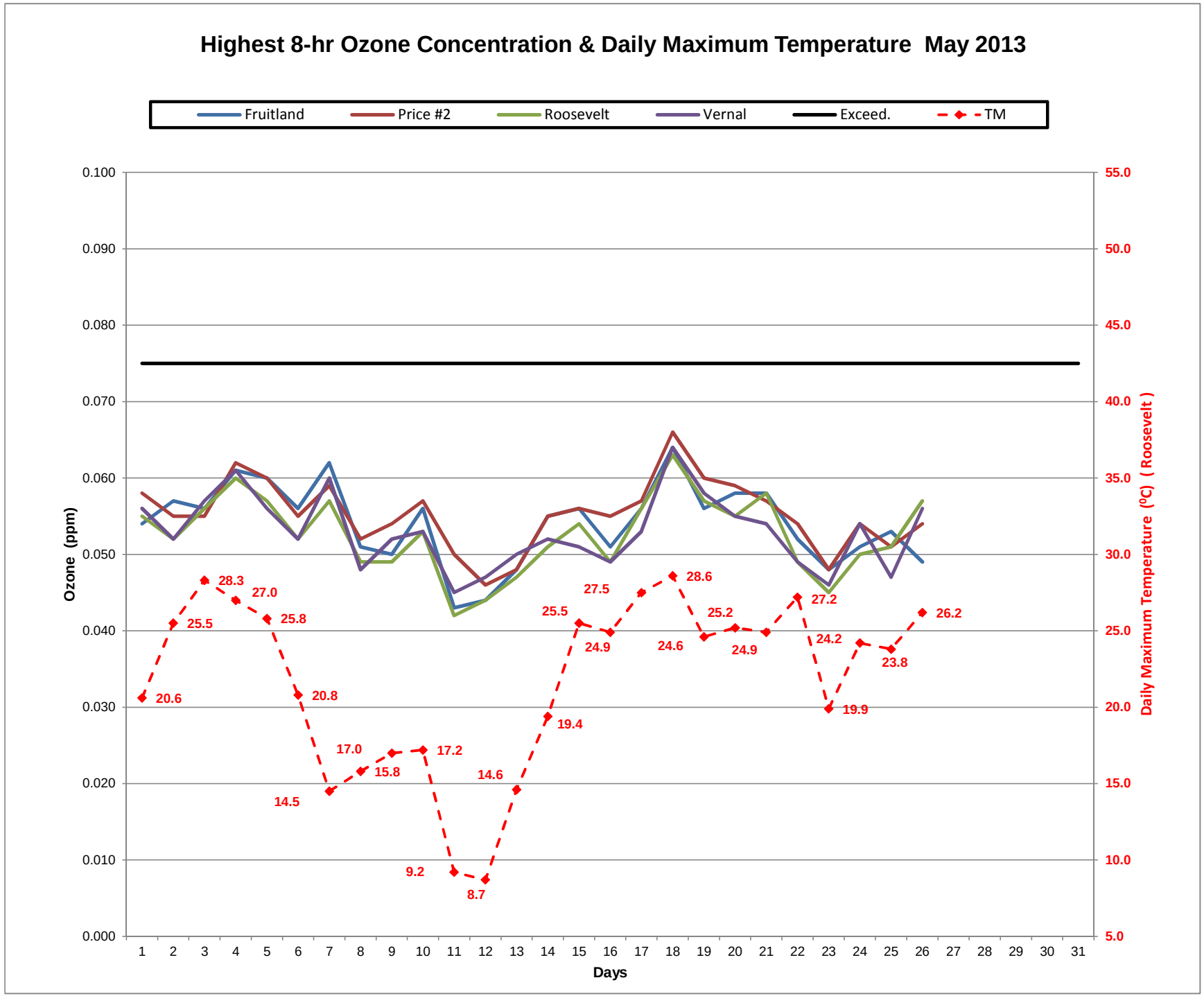
17.8
18.6
18.6
20.4

Highest 8-hr Ozone Concentration & Daily Maximum Temperature May 2013




Highest 8-hr Ozone Concentration & Daily Maximum Temperature May 2013
Fruitland
Price #2
Roosevelt
Vernal
Exceed.
TM
Ozone (ppm)
Daily Maximum Temperature (°C) (Roosevelt)
Days
0.100
0.090
0.080
0.070
0.060
0.050
0.040
0.030
0.020
0.010
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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
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19.4
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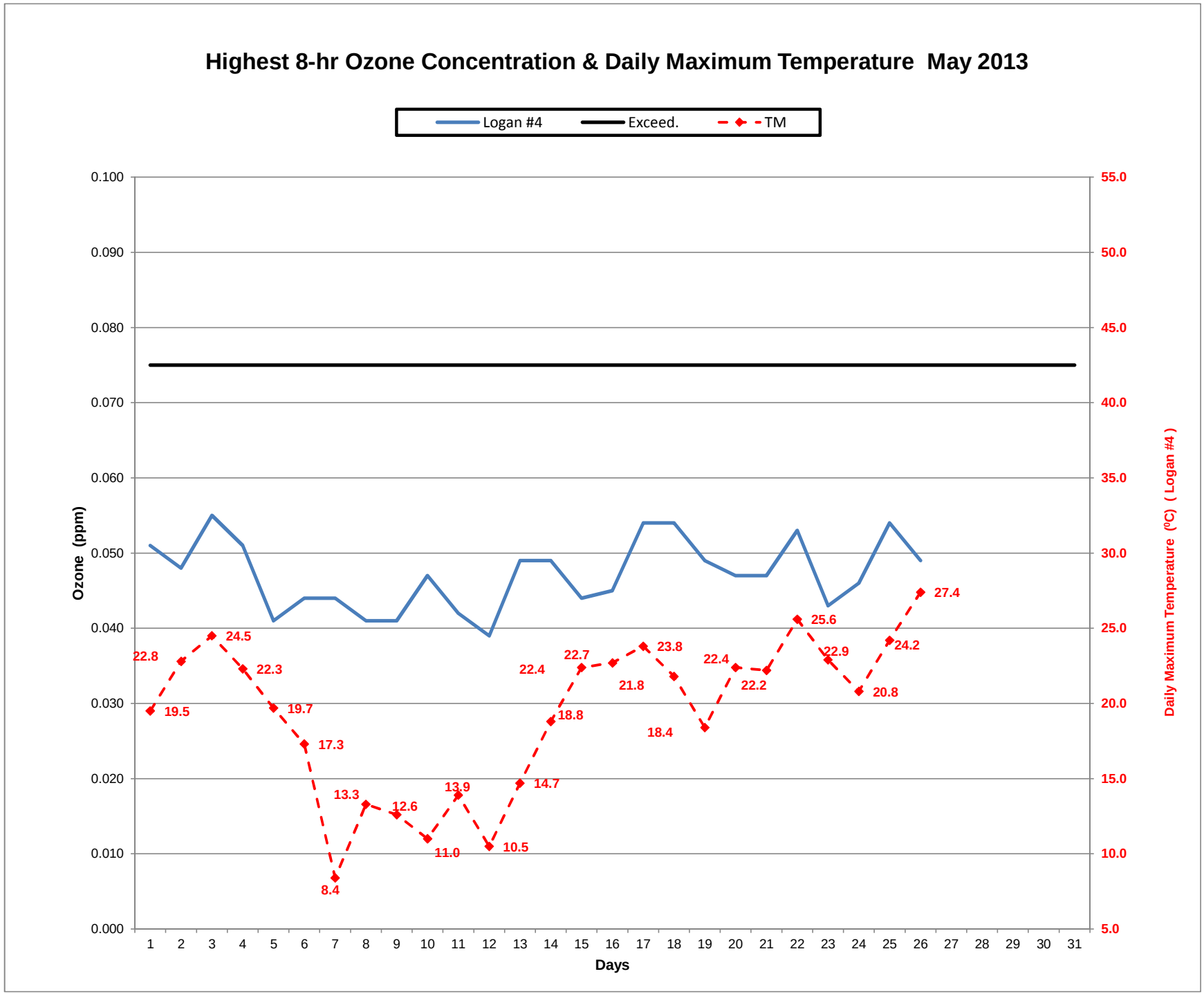
Highest 8-hr Ozone Concentration & Daily Maximum Temperature May 2013
Logan #4
Exceed.
TM
Ozone (ppm)
Daily Maximum Temperature (⁰C) (Logan #4)
Days
0.100
0.090
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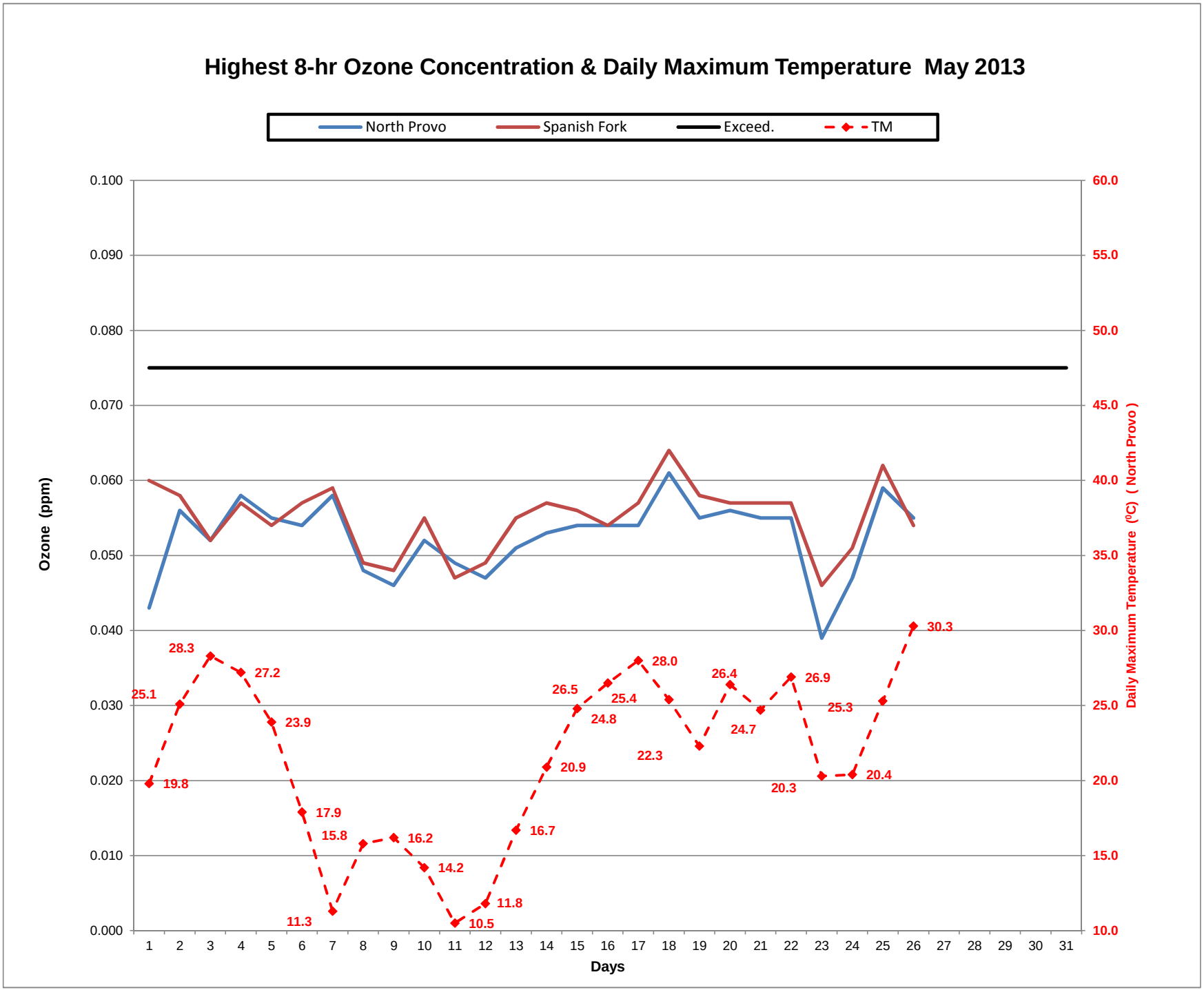
27.4


Highest 8-hr Ozone Concentration & Daily Maximum Temperature May 2013
North Provo
Spanish Fork
Exceed.
TM
Ozone (ppm)
Daily Maximum Temperature (ºC) (North Provo)
Days
0.100
0.090
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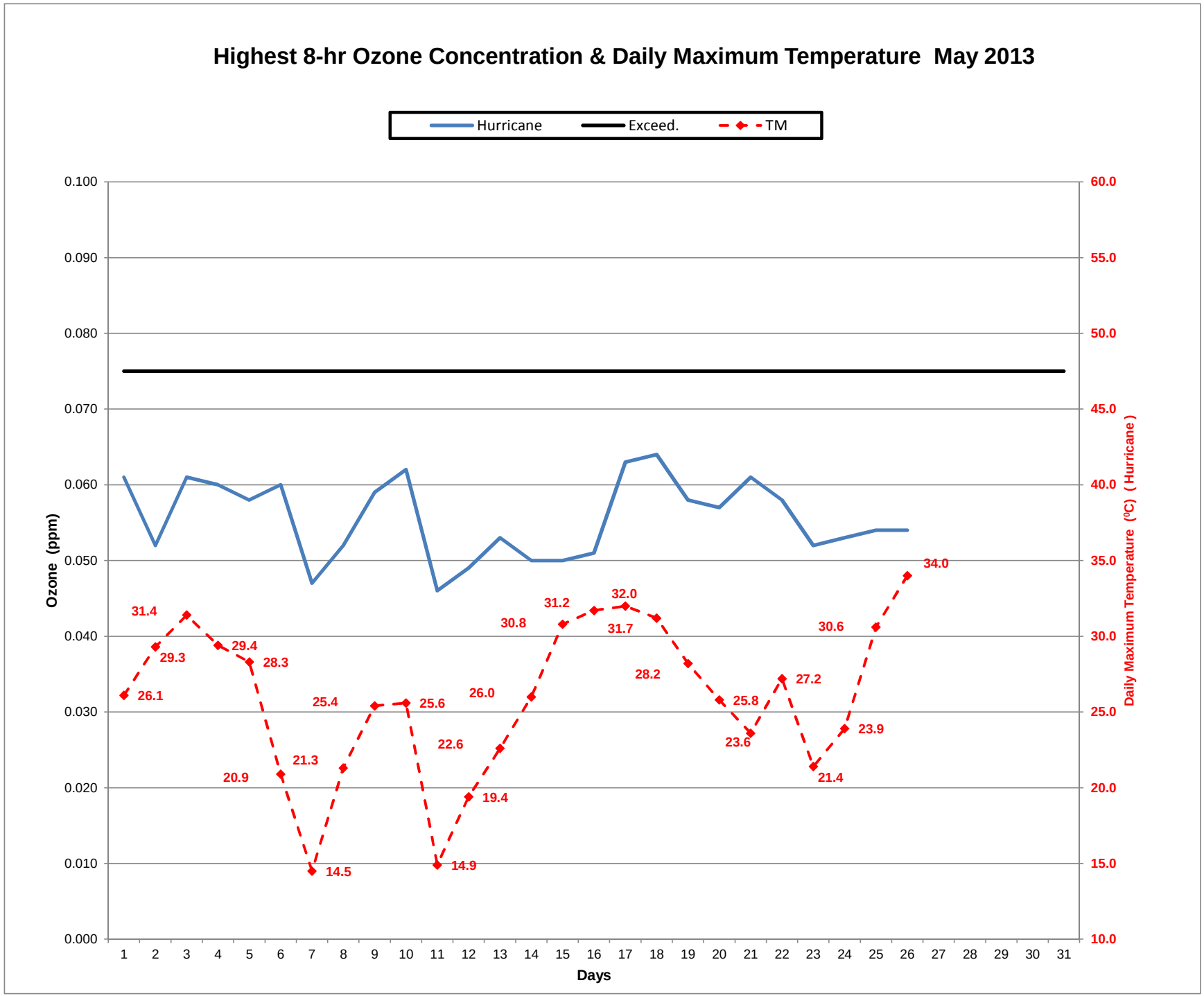
Highest 8-hr Ozone Concentration & Daily Maximum Temperature May 2013
Hurricane
Exceed.
TM
Ozone (ppm)
Daily Maximum Temperature (ºC) (Hurricane)
Days
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0.070
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