



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

Air Quality Board
Erin Mendenhall *Chair*
Cassady Kristensen, *Vice-Chair*
Kevin R. Cromar
Mitra Basiri Kashanchi
Randal S. Martin
Alan Matheson
Arnold W. Reitze Jr.
Michael Smith
William C. Stringer
Bryce C. Bird,
Executive Secretary

DAQ-010-19

UTAH AIR QUALITY BOARD MEETING

FINAL AGENDA

Wednesday, February 6, 2019 - 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: March 6, 2019
- III. Approval of the Minutes for January 2, 2019, Working Lunch and Board Meeting.
- IV. Final Adoption: Amend R307-101-2. Definitions. Presented by Thomas Gunter.
- V. Informational Items.
 - A. Inland Port. Presented by Jonny Vasic and Dr. Brian Moench, Utah Physicians for a Healthy Environment.
 - B. Legislative Update. Presented by Bryce Bird.
 - C. Air Toxics. Presented by Robert Ford.
 - D. Compliance. Presented by Jay Morris and Harold Burge.
 - E. Monitoring. Presented by Bo Call.
 - F. Other Items to be Brought Before the Board.
 - G. Board Meeting Follow-up Items.

In compliance with the Americans with Disabilities Act, individuals with special needs (including auxiliary communicative aids and services) should contact Larene Wyss, Office of Human Resources at (801) 536-4281, TDD (801) 536-4284 or by email at lwyss@utah.gov.

ITEM 3



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UTAH AIR QUALITY BOARD WORKING LUNCH
January 2, 2019 – 11:30 a.m.
195 North 1950 West, Four Corners Conference Rooms
Salt Lake City, Utah 84116

DRAFT MINUTES

Board members present: Erin Mendenhall, Kevin Cromar, Randal Martin, Alan Matheson, Arnold Reitze, Michael Smith, and Mitra Kashanchi (attendance by phone)

Staff update on the Division of Air Quality Compliance Program.

Jay Morris, Harold Burge, and Robert Ford are the Compliance section managers at DAQ. Major and Minor Source Compliance sections are responsible for ensuring that all regulatory requirements are met at sources subject to state rules and permit requirements. The Air Toxics section is responsible for asbestos and lead-based paint programs. The managers explained the compliance process listing the resources that are available, how inspections are targeted, and how these actions fit in a compliance/enforcement cycle.

Violations can be resolved in two ways, the compliance advisory (CA) and early administrative settlement or formal notice of violation (NOV) process. The CA process is not required in any rules, it is used as a supplemental process as a way to bring sources back into compliance in a shorter timeframe than the NOV process which can take years if it goes through the legal system. The review of which process to use is done on a case-by-case basis. There has been a push to have long-standing enforcement cases go through the legal system to get judges to issue orders that interpret law. The Board has asked that staff put together some recommendations for the penalty categories for violations including descriptions, so that the Board could consider different qualifiers for the Class A, B, or C penalty categories; as well as any other procedural tools that could help move violations along faster and better through the process. Staff will prepare their recommendations and present them to the Board in March.

Mr. Cromar asked why Board meetings are canceled throughout the year. He believes meetings should not be canceled because there are a lot of air quality issues that could be discussed each month even if there are no rules to be brought before the Board. Ms. Mendenhall added that a discussion on the process of how the agendas are created would be helpful. In discussion, it was decided to keep it as is for now and that if there are not sufficient rules to bring forward in a Board meeting, that a working lunch session would work on the off months. The decision on the need for a working lunch could be stated during the Board meeting follow-up items.



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UTAH AIR QUALITY BOARD MEETING

January 2, 2019 – 1:30 p.m.
195 North 1950 West, Room 1015
Salt Lake City, Utah 84116

DRAFT MINUTES

I. Call-to-Order

Erin Mendenhall called the meeting to order at 1:36 p.m.

Board members present: Erin Mendenhall, Cassady Kristensen, Kevin Cromar, Randal Martin, Mitra Kashanchi (attendance by phone), Alan Matheson, Arnold Reitze, Michael Smith

Excused: William Stringer

Executive Secretary: Bryce Bird

II. Date of the Next Air Quality Board Meeting: February 6, 2019

III. Approval of the Minutes for November 7, 2018, Board Meeting.

- Arnold Reitze motioned to approve. Randal Martin seconded. The Board approved unanimously.

Ms. Erin Mendenhall states that the public comment period for the final adoption agenda items have already been held. Public requests to make comments today will not be allowed, unless Board members had specific questions.

IV. Final Adoption: SIP Subsection IX.A.31: Control Measures for Area and Point Sources, Fine Particulate Matter, Serious Area PM2.5 SIP for the Salt Lake City, UT Nonattainment Area, as Amended. Presented by Bill Reiss.

Bill Reiss, Environmental Engineer at DAQ, stated that we had already proposed Part H of the state implementation plan (SIP) for public comment in June 2018. Some comments took issue with DAQ's characterization of BACM and BACT (best available control measures and best available control technology) as "generally independent" of the attainment demonstration and the remainder of the SIP. Because the BACT underlying the emission limits in Part H affected not just PM2.5, but also the PM2.5 precursor emissions, NOx, SOx, VOC and NH3, the PM2.5 implementation rule allows that precursor emissions may be exempted from BACT controls where, for example the state has submitted a major stationary source precursor demonstration and the demonstration has been approved by EPA.

Included with one of the comments on Part H was a major stationary source precursor demonstration for each of the four plan precursors. In September 2018, the Board granted the Utah Petroleum Association's (UPA) petition to include its comment with these precursor demonstrations for public review as part of the overall comment period surrounding Part A. DAQ also indicated at that time, that it too would like to independently evaluate each precursor, and do so in consultation with EPA. DAQ's completed model is included as Attachment C.

The serious area SIP for the Salt Lake City PM_{2.5} nonattainment area presented today is in addition to the moderate area SIP that has already been submitted. Among its elements are a demonstration that the area will attain the national ambient air quality standards (NAAQS) by the end of 2019 and provisions to insure the implementation of BACM and BACT. It also contains emission inventories for both the base year and the attainment year, mobile source budgets for the purposes of transportation conformity, quantitative milestones which demonstrate reasonable further progress (RFP), and contingency measures.

Air quality modeling is included in the analysis, but it does not conclude with a likelihood that we will attain the NAAQS by the attainment date at every monitor in the nonattainment area (NAA). Of the six monitors throughout the NAA, Rose Park is still predicted to be over the standard in 2019 at 35.9 ug/m³. However, additional information and analysis is presented alongside the modeling which make up what is called a weight-of-evidence (WOE), to all be considered as a whole in determining whether the area is likely to reach attainment by its attainment date in 2019. The WOE also shows a relationship between the control of precursor emissions and the improvements in PM_{2.5}, and that ambient concentrations of PM_{2.5} are declining. Finally, the WOE considers a daily value identified at Rose Park which could potentially be excluded as an exceptional event because it was influenced by wild land fire. If it was to be excluded, the modeling itself would pass on its own. In essence, we conclude that the entire WOE supports a likelihood that the Salt Lake City NAA will attain the NAAQS in 2019. This would mean that we don't have to ask EPA for an extension of the attainment date and that BACM and BACT is the benchmark for emissions control and not most stringent measures. Having worked with EPA throughout this process, DAQ feels confident this SIP is one that EPA can ultimately approve.

As mentioned before, this SIP was released for a 30 day public comment period alongside the UPA's major source precursor demonstration, in which they conclude that DAQ does not need to require any additional controls from existing major stationary sources for any of the four PM_{2.5} plan precursors. The most significant comment from EPA asked that we bolster the RFP and quantitative milestone discussion. In response, staff added tables that indicate schedules for implementation of the various control measures.

The most significant comments received surrounded the major stationary source precursor demonstration, the accompanying petition by UPA to include a demonstration for each of the plan precursors in the SIP, and to advocate for their approval by EPA. DAQ's response is that it is not electing at this time to include a major stationary source precursor demonstration for any of the four PM_{2.5} plan precursors in this SIP in part by its own precursor analyses which was done in response to the initial comment. In short, UDAQ's analysis uses the final 2019 emissions inventory which was not available when Ramboll did its analyses for UPA; it corrects for bias in the analysis by relating the modeled change in PM_{2.5} to actual on-site observations; it looks at the individual species of PM_{2.5}; it evaluates impact over the entire spatial field of the NAA, in addition to looking at discrete monitoring locations; and it applies a source-apportionment feature of CAMx which estimates how much secondary aerosol, nitrate, sulfate, and ammonium, is from major stationary sources. However, DAQ's stated position includes in every instance the caveat of, "at this time." In doing so, it is acknowledging that the circumstances affecting some of the factors that were considered in reaching this position may

change. They could possibly change as this SIP makes its way through the federal approval process. And it is conceivable that they could change as Utah continues to address 24-hour PM_{2.5} in this NAA.

Given more time to more fully develop such major stationary source precursor demonstrations, one could imagine arriving at an analysis that could likely win subsequent approval by EPA. The “concentration-based” analyses presented thus far are of a coarser variety than what is ultimately allowed by the PM_{2.5} implementation rule. A more refined “sensitivity-based” analysis would likely change some of these conclusions. Better information, particularly with regard to ammonia emissions, will certainly become available. And importantly, the economics surrounding the cost/benefit analysis could change, such that it becomes more appropriate to consider dollars per microgram in addition to the more conventional dollars per ton. Staff recommends that SIP Subsection IX.A, Control Measures for Area and Point Sources, Fine Particulate Matter, Serious Area PM_{2.5} SIP for the SLC, UT NA Area be adopted as amended

In response to the question if the ammonia injection, the model, was done area wide, staff responded that it was done county by county based on some ambient measures. In other response, the exceptional event mentioned at Rose Park was one day, but it’s the value that is collected that represents the 98th percentile for 2015. We incur a lot of events that are influenced by things outside of our local control. Wild land fires being one of those that affect PM_{2.5}, and can be excluded from the record. When staff considers whether to submit an exceptional event, they work closely with EPA on the data record to see if it’s going to have regulatory significance or not.

- Kevin Cromar moved that the Board adopt SIP Subsection IX.A.31: Control Measures for Area and Point Sources, Fine Particulate Matter, Serious Area PM_{2.5} SIP for the Salt Lake City, UT Nonattainment Area, as amended. Arnold Reitze seconded. The Board approved unanimously.

V. Final Adoption: Change in Proposed Rule R307-110-10. Section IX, Control Measures for Area and Point Sources, Part A, Fine Particulate Matter. Presented by Thomas Gunter.

Thomas Gunter, Rules Coordinator at DAQ, stated that the amendments to Section IX, Control Measures for Area and Point Sources, Part A, Fine Particulate Matter just adopted by the Board will have to be incorporated into the Utah Air Quality Rules. R307-110-10 is the rule that incorporates those amendments. On September 5, 2018, the Board proposed an amended R307-110-10 for a 30 day public comment period. The public comment period was held from October 1, 2018, through October 31, 2018, and no comments were received. Staff recommends that the Board adopt the change in proposed rule 307-110-10 as amended.

- Arnold Reitze motioned that the Board adopt proposed rule R307-110-10. Section IX, Control Measures for Area and Point Sources, Part A, Fine Particulate Matter. Michael Smith seconded. The Board approved unanimously.

VI. Final Adoption: SIP Subsection IX. Part H: Emission Limits and Operating Practices. Specifically Requirements in Subparts H. 1, 2, 11, and 12, as Amended. Presented by Bill Reiss.

Bill Reiss, Environmental Engineer at DAQ, stated that Part H is where any appropriate limits and operating practices are folded into the serious area SIP, specifically for the Salt Lake City NAA. Subparts H.1 and H.2 are for PM₁₀ and Subparts H.11 and H.12 are for PM_{2.5}. For this item, PM₁₀ revisions in Subparts H.1 and H.2 are mainly for consistency with the PM_{2.5} limits that follow. The revisions in Subparts H.11 and H.12 PM_{2.5} have been introduced in order to implement BACT at the existing major stationary sources in support of this serious area SIP. The source-specific BACT reviews included with Part A are essentially the technical basis for what appears in Part H.

Part H was proposed twice for public comment. First in June 2018 where the Utah Petroleum Association (UPA) included in their comments a major stationary source precursor demonstration and also commented that it would be premature to consider BACM and BACT for the PM2.5 precursors until the air quality modeling could determine whether in fact certain precursor emissions could or could not be exempted from the BACT provisions.

The second comment period was November 1, 2018, through November 30, 2018, and addressed new information affecting the BACT analyses for four specific sources, Hexcel, Rio Tinto Kennecott, Compass Minerals, and ATK, along with amendments proposed by the Board in October 2018. Most significant comments were issues surrounding any major stationary source precursor demonstrations. A comment asked that DAQ elect to adopt each specific demonstration into the SIP and to then advocate to the EPA for its approval. In addition, that Part H be re-structured to make any new requirements affecting PM2.5 precursor emissions provisional; thereby, effective only on the subsequent disapproval by EPA of the respective demonstration.

DAQ's response to the precursor question was already discussed in agenda Item IV. Staff's response to the second point of should Part H be re-structured to conditionally delay any additional control measures affecting precursor emissions is no, since the SIP will not include any such demonstration, it will not be necessary to wait for any subsequent action by EPA.

Mr. Reiss addressed recommendations made by the Board at the October 2018 meeting and explained DAQ's disagreement with each proposal which included: 1) That all stack testing be required at least once per year. 2) That elimination of seasonal differences in emission limitations, such that the more stringent limit be applied throughout the year. This would apply in six specific instances. 3) At Kennecott's Unit 4, that only the combustion of natural gas be permissible, even during summer months.

1) Stack testing frequency, in most cases DAQ believes the current minimum testing frequency of once every three years is adequate. However, it recognizes there are instances where more frequent monitoring is appropriate. Factors to be considered when possibly requiring more frequent testing would include: a variable emission stream; a variety, or a mixture of fuels; a batch processes; or a history of operating near permitted limits. Also, parametric monitoring might be available as an alternate means to provide the continuous data needed to demonstrate that a source is operating within its limits. Having considered these factors, DAQ concludes that it is in fact appropriate to require annual stack testing at each of the following sources: Chemical Lime Company (Lhoist North America) (H.12.c), Compass Minerals (H.12.e.1 and H.12.e.ii), Kennecott Utah Copper – Power Plant (H.12.j), and Nucor Steel Mills (H.12.k). None of the remaining sources meets this criteria and testing every three years is appropriate to ensure compliance.

2) On seasonal limits which may be imposed to enhance the control of emissions during defined periods when atmospheric conditions can intensify the effect on human health. For PM2.5, wintertime atmospheric conditions allow for the chemical reactions necessary to create secondary PM2.5. More restrictive limitations during such periods might be achieved at an affected source by scheduling maintenance outside the period, lowering production, changing feedstocks, or switching fuels. At the end of the seasonal period, the source could resume normal operation and still meet its annual goals. Simply changing a seasonal limit to an annual limit does not always help meet air quality objectives.

3) On Kennecott's Power Plan of fuel switching at Unit 4, it could be a more appropriate BACT determination under different circumstances, an ozone SIP for example, or as a BACT analysis for a

permitting action. But summertime fuel switching at Unit 4 will not help remedy Utah's 24-hour PM2.5 exceedances.

Staff recommends that the Board adopt SIP Subsection IX, Part H, Emission Limits and Operating Practices, and as further amended in Subparts H.1, H.2, H.11, and H.12.

Public response from Joro Walker of Western Resource Advocates addressing the BACT issue was introduced. Ms. Walker states that it is very clear that BACT and BACM both are generally divorced from attainment. It doesn't have to do with attainment, it has to do with what is actually the best available control technology and that is, unless circumstances prevent it, an emission limit. In Subpart H, DAQ lists a series of emission limits for the Kennecott's Unit 4 when it's burning natural gas. That emission limit not surprisingly, is lower than the emissions associated with Unit 4 when it's burning coal. The question becomes which emissions limit represents the maximum production of emissions, and the answer to that is the emissions limits associated with Unit 4 when it's burning natural gas. The determination is that the emissions limits associated the Unit 4 when it burns natural gas represent the lowest emission limit that facility can achieve. So that is the emission limit, and that is what the law requires.

Cassady Kristensen makes a statement that Rio Tinto Kennecott is her employer and as co-chair of the Board she intends to participate and vote, as she can, on this agenda item.

In response to how does seasonal BACT analysis, like was done in the case of Kennecott's Unit 4, satisfy the requirements of 189(b). Mr. Reiss responds that in speaking about the intermittence of a seasonal structured control, DAQ actually has a history of doing this and so we have been past that legal bridge. The distinction is that we define our seasons in terms of the calendar year. It's not intermittent in the way the Clean Air Act (CAA) describes things with respect to how ambient levels may be fluctuating maybe up or down. Rather it's defined as a winter time season during which we incur our cold-pool meteorology and drive our secondary chemistry. We have objectively said that we need to apply BACT during the season when the PM2.5 is the most important. We feel that this satisfies our intent. Ultimately however, it's the EPA that should determine whether in fact we have met BACT in every case.

Public response from Jacob Santini of Parsons, Behle, and Latimer addressing the legal basis for having a seasonal BACT satisfying 189(b) was introduced. Mr. Santini first states that Section 123 prohibits the use of intermittent controls, but that section expresses narrowly what intermittent controls are, which are controls that vary with atmospheric conditions. EPA has said that what that means is that the controls become effective when you reach a certain level. EPA has also explained that seasonal controls are not intermittent controls. So the CAA does not exclude seasonal controls and that you can see that EPA very much embraces seasonal controls when you have a NAAQS that manifests itself in a seasonal increase of emissions. In addition, the PM2.5 implementation rule allows for an inventory based on a season. The inventory that DAQ has relied on excludes all coal emissions from Kennecott's Unit 4. Mr. Santini then describes some of EPA's actions on ozone SIPs, which manifests itself seasonally just like PM2.5, showing that EPA's history allows for seasonal controls. Section 189 does not say anything about annual or not. Section 189 requires BACT to be implemented and so we have a SIP that is designed to fix PM2.5 and Kennecott will implement controls from March 1 to October 31. Finally, going back to BACT, Kennecott is not in the position that it's technically infeasible to operate natural gas year-round, it can. But they have not heard discussion on the economic feasibility which has to be taken into account for a BACT analysis. Kennecott produces its own power and also purchases power from third party utilities. In the summertime they have the option of burning coal or natural gas which impacts the economic analysis. Because of the cost savings in the summertime that are dependent on the flexibility of burning coal or natural gas, Kennecott is able to idle Unit 4

voluntarily during the wintertime inversion season which shows a decrease in wintertime emissions as a result of the flexibility.

Mr. Reitze responds that he is not sure that BACT in 189 is related to the requirement for controlling PM_{2.5}. He believes that BACT is more of an absolute requirement under the CAA.

Mr. Cromar states his frustration that responses to the question of how seasonal BACT meets the requirements of Section 189 was not directly answered. The EPA clearly states that Section 189 is designed to implement measures provided for attainment and to separately adopt emission strategies that will be effective at reducing PM_{2.5} levels in the area. In addition, the Board made this change to Kennecott in September 2018 with the idea that it would allow the source enough time to submit economic burden showing it was not BACT. There was complete absence of such an analysis in any of the comments.

In response to the limits for a coal-fired boiler in Part H BACT, Jon Black, Major New Source Review Section Manager at DAQ, responded that the BACT analysis was actually based upon a piece of control equipment and not upon a fuel source. So the BACT analysis that was done for Unit 4 actually considered over-fire air, considered selective catalytic reduction (SCR), and low-NO_x burners, and was performed for the winter time operation. During the winter time Kennecott has elected to go with natural gas as a fuel source which has been done in the past. One of the benefits of the BACT analysis that was done for the winter time season is that SCR would be applicable year-round. So while it is utilized for natural gas during the wintertime, it will also be utilized during the summertime operation.

- Kevin Cromar motioned that the Board amend the period November 1 to February 28/29 inclusive listed on page 28 line 3 item D; amend the period March 1 to October 1 inclusive on page 29 line 20 item E; amend the period from November 1, to the last day in February inclusive on page 83 line 7 item A.I; and amend the period from March 1 to October 31 on page 83 line 27 item 2.III to the period of year-round January 1 to December 31 so that Kennecott Unit #4 has to operate natural gas year-round. Arnold Reitze seconded.

Discussion to the motion.

Cassady Kristensen recuses herself from this vote and this discussion.

Mr. Smith commented that this SIP is very specific to the PM_{2.5}, but the ozone SIP that is potentially coming down the road would cover the summertime controls that the Board is discussing today. Mr. Reitze agrees that it is appropriate for this SIP. PM_{2.5} is a harmful health problem even in attainment and BACT was designed to drive the technology to move a more stringent standard independent of the atmospheric concentrations of PM_{2.5}.

Mr. Bird commented that DAQ staff's review on this issue is that the technology is in place. So the most stringent technology is the SCR over fire air and low NO_x burners, which is the technology that is in place in this case. And that as was mentioned, this change may actually increase wintertime emissions based on economics.

- After discussion, the Board votes. The motion carries with four in favor (A. Reitze, R. Martin, K. Cromar, E. Mendenhall), two opposed (M. Smith, M. Kachanchi), and one recused (C. Kristensen).

For the second part of this item, Mr. Cromar asks for an explanation of the sequence of events for this document. Specifically, Rio Tinto's comments that reference a DAQ document dated November 30 when their comments should have been received October 31 at DAQ. Staff responds that when the proposal changed at the September meeting, staff created a discussion of the changes made by the Board in the rulemaking submittal to the Office of Administrative Rules. This document is available at the start of the comment period.

Mr. Cromar is also concerned that staff refers to the Board's September decisions as comments and not as actions by the Board. It is recommended that this issue of staff's reaction to Board actions or comments might be presented in a Board work session at a later date.

It was also noted in discussion, that the changes made today are not substantial to require an additional comment period. If approved, it does not become effective until it is published in the State Bulletin for 30 days.

- Arnold Reitze motioned that the Board approve SIP Subsection IX. Part H for final adoption, as amended. Kevin Cromar seconded. The motion carries with five in favor (A. Reitze, R. Martin, K. Cromar, E. Mendenhall, M. Kachanchi) and two opposed (M. Smith, C. Kristensen).

VII. Final Adoption: Change in Proposed Rule, R307-110-17. Section IX, Control Measures for Area and Point Sources, Part H, Emission Limits. Presented by Thomas Gunter.

Thomas Gunter, Rules Coordinator at DAQ, stated that the amendments to Section IX, Control Measures for Area and Point Sources, Part H, Emission Limits just adopted by the Board will have to be incorporated into the Utah Air Quality Rules. R307-110-17 is the rule that incorporates those amendments. On June 6, 2018, the Board proposed an amended R307-110-17 for a 45 day public comment period. Due to substantial amendments made following the first comment period, an additional 30 day comment period was proposed by the Board on October 3, 2018. That comment period was held from November 1, 2018, to November 30, 2018. No comments were received during either comment period. Staff recommends that the Board adopt change in proposed rule 307-110-17 as amended.

- Randal Martin motioned that the finally adopt change in proposed rule R307-110-17. Section IX, Control Measures for Area and Point Sources, Part H, Emission Limits. Arnold Reitze seconded. The Board approved unanimously.

VIII. Final Adoption: Change in Proposed Rule R307-511. Oil and Gas Industry: Associated Gas Flaring. Presented by Thomas Gunter.

Thomas Gunter, Rules Coordinator at DAQ, stated after learning that some oil and gas wells throughout the state were unable to utilize the streamlined permitting process approved by the Board in January 2018; DAQ presented the Board with new rule R307-511 on September 5, 2018, as a solution to this issue. On September 5, 2018, the Board proposed R307-511 for a 30 day public comment period. The public comment period was held from October 1, 2018, through October 31, 2018, and comments were received from two organizations. In response to the comments, staff amended R307-511 to provide clarity regarding the definition of "Associated Gas." The amendments do not alter the intent of the rule as originally proposed. Staff recommends that the Board adopt change in proposed R307-511 as amended.

- Kevin Cromar motioned that the Board adopt change in proposed rule R307-511 as amended. Arnold Reitze seconded. The Board approved unanimously.

IX. Informational Items.

A. Regional Haze State Implementation Plan Amendment. Presented by Jay Baker.

Jay Baker, Environmental Scientist at DAQ, stated that in June 2015, DAQ submitted a regional haze SIP to EPA to satisfy BART for PM and NO_x. Staff proposed an alternative to BART for NO_x using a weight-of-evidence (WOE) analysis to prove that the alternative was in fact better than BART. In 2016, EPA approved BART for PM. However, EPA disapproved the alternative to BART for NO_x and stated that the WOE analysis did not show that the alternative was clearly better than BART, and so EPA issued a federal implementation plan (FIP). Utah appealed EPA's decision in the courts and currently the FIP is stayed while staff and EPA work together to come up with something that is approvable.

In working with EPA, they suggest that DAQ do some additional modeling using the CAMX model, and to also use a two-pronged test which is more objective. If you meet both prongs, then you can say the alternative is better. The two-prongs tests would need to show that visibility doesn't decline in any Class I area, and that there is an overall improvement in visibility determined by comparing the average differences between BART and the alternative overall affected Class I areas. DAQ did the tests and results show that the analysis meets both prongs. Staff has is working with EPA

Utah is ready to submit this SIP revision. The plan is currently at a required 60 day review period by federal land managers. Staff plans to bring the regional haze SIP revisions to the Board in March 2019 for a proposal for public comment.

B. Air Toxics. Presented by Robert Ford.

C. Compliance. Presented by Jay Morris and Harold Burge.

D. Monitoring. Presented by Bo Call.

Bo Call, Air Monitoring Section Manager at DAQ, updated on the monitoring charts. DAQ does not have end of year monitoring data as results from filters take a couple of weeks. The current 98th percentile value at Rose Park is 29.2 which is below the standard. That number is with 341 samples in and 24 samples still need to be accounted for. Rose Park uses monitors for both continuous methods and filter methods. Potential exceptional events have been taken into account and flagged for Rose Park which is kind of a controlling monitor.

It was also noted, that our redundant filters are all federal reference filtering monitoring methods, and our issue in the past has been data capture. So if a number of filters are missed then it impacts the 98th percentile value. With the redundant filters we are able to use the monitoring system with the best data capture for a quarter. Each quarter it may be different and so it's not based on the monitored value, it's based on data capture rates.

E. Other Items to be Brought Before the Board.

F. Board Meeting Follow-up Items.

Meeting adjourned at 3:08 p.m.

ITEM 4



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DAQ-004-19

MEMORANDUM

TO: Air Quality Board

THROUGH: Bryce C. Bird, Executive Secretary

FROM: Alan Humpherys, Minor New Source Review Section Manager

DATE: January 23, 2019

SUBJECT: FINAL ADOPTION: Amend R307-101-2. Definitions.

During the 2014 General Session of the Utah Legislature, House Bill 31 (H.B. 31) removed the definition of “facility” from Utah Code §19-2-102. During the November 2018 Air Quality Board meeting, the Board proposed for public comment an amendment to R307-101-2 that removed the definition of “facility” from Utah Air Quality Rules. This change was made to bring Utah Air Quality Rules in line with changes made in House H.B. 31.

A public comment period was held from December 1, 2018, to January 2, 2019. No comments were received and no hearing was requested.

Recommendation: Staff recommends that the Board adopt rule R307-101-2 as amended.

1 **R307. Environmental Quality, Air Quality.**

2 **R307-101. General Requirements.**

3 ---

4 **R307-101-2. Definitions.**

5 Except where specified in individual rules, definitions in R307-
6 101-2 are applicable to all rules adopted by the Air Quality Board.

7 "Actual Emissions" means the actual rate of emissions of a
8 pollutant from an emissions unit determined as follows:

9 (1) In general, actual emissions as of a particular date shall
10 equal the average rate, in tons per year, at which the unit actually
11 emitted the pollutant during a two-year period which precedes the
12 particular date and which is representative of normal source operations.
13 The director shall allow the use of a different time period upon a
14 determination that it is more representative of normal source operation.
15 Actual emissions shall be calculated using the unit's actual operating
16 hours, production rates, and types of materials processed, stored, or
17 combusted during the selected time period.

18 (2) The director may presume that source-specific allowable
19 emissions for the unit are equivalent to the actual emissions of the
20 unit.

21 (3) For any emission unit, other than an electric utility steam
22 generating unit specified in (4), which has not begun normal operations
23 on the particular date, actual emissions shall equal the potential to
24 emit of the unit on that date.

25 (4) For an electric utility steam generating unit (other than a
26 new unit or the replacement of an existing unit) actual emissions of the
27 unit following the physical or operational change shall equal the
28 representative actual annual emissions of the unit, provided the source
29 owner or operator maintains and submits to the director, on an annual
30 basis for a period of 5 years from the date the unit resumes regular
31 operation, information demonstrating that the physical or operational
32 change did not result in an emissions increase. A longer period, not to
33 exceed 10 years, may be required by the director if the director
34 determines such a period to be more representative of normal source
35 post-change operations.

36 "Acute Hazardous Air Pollutant" means any noncarcinogenic
37 hazardous air pollutant for which a threshold limit value - ceiling
38 (TLV-C) has been adopted by the American Conference of Governmental
39 Industrial Hygienists (ACGIH) in its "Threshold Limit Values for
40 Chemical Substances and Physical Agents and Biological Exposure Indices,
41 (2009)."

42 "Air pollutant" means a substance that qualifies as an air
43 pollutant as defined in 42 U.S.C. Sec. 7602.

44 "Air Pollutant Source" means private and public sources of
45 emissions of air pollutants.

46 "Air Pollution" means the presence of an air pollutant in the
47 ambient air in such quantities and duration and under conditions and
48 circumstances, that are injurious to human health or welfare, animal or
49 plant life, or property, or would unreasonably interfere with the

1 enjoyment of life or use of property as determined by the standards,
2 rules and regulations adopted by the Air Quality Board (Section 19-2-
3 104).

4 "Allowable Emissions" means the emission rate of a source
5 calculated using the maximum rated capacity of the source (unless the
6 source is subject to enforceable limits which restrict the operating
7 rate, or hours of operation, or both) and the emission limitation
8 established pursuant to R307-401-8.

9 "Ambient Air" means that portion of the atmosphere, external to
10 buildings, to which the general public has access. (Section 19-2-
11 102(4)).

12 "Appropriate Authority" means the governing body of any city, town
13 or county.

14 "Atmosphere" means the air that envelops or surrounds the earth
15 and includes all space outside of buildings, stacks or exterior ducts.

16 "Authorized Local Authority" means a city, county, city-county or
17 district health department; a city, county or combination fire
18 department; or other local agency duly designated by appropriate
19 authority, with approval of the state Department of Health; and other
20 lawfully adopted ordinances, codes or regulations not in conflict
21 therewith.

22 "Board" means Air Quality Board. See Section 19-2-102(8)(a).

23 "Breakdown" means any malfunction or procedural error, to include
24 but not limited to any malfunction or procedural error during start-up
25 and shutdown, which will result in the inoperability or sudden loss of
26 performance of the control equipment or process equipment causing
27 emissions in excess of those allowed by approval order or Title R307.

28 "BTU" means British Thermal Unit, the quantity of heat necessary
29 to raise the temperature of one pound of water one degree Fahrenheit.

30 "Calibration Drift" means the change in the instrument meter
31 readout over a stated period of time of normal continuous operation when
32 the VOC concentration at the time of measurement is the same known
33 upscale value.

34 "Carbon Adsorption System" means a device containing adsorbent
35 material (e.g., activated carbon, aluminum, silica gel), an inlet and
36 outlet for exhaust gases, and a system for the proper disposal or reuse
37 of all VOC adsorbed.

38 "Carcinogenic Hazardous Air Pollutant" means any hazardous air
39 pollutant that is classified as a known human carcinogen (A1) or
40 suspected human carcinogen (A2) by the American Conference of
41 Governmental Industrial Hygienists (ACGIH) in its "Threshold Limit
42 Values for Chemical Substances and Physical Agents and Biological
43 Exposure Indices, (2009)."

44 "Chargeable Pollutant" means any regulated air pollutant except
45 the following:

46 (1) Carbon monoxide;

47 (2) Any pollutant that is a regulated air pollutant solely
48 because it is a Class I or II substance subject to a standard
49 promulgated or established by Title VI of the Act, Stratospheric Ozone

1 Protection;

2 (3) Any pollutant that is a regulated air pollutant solely
3 because it is subject to a standard or regulation under Section 112(r)
4 of the Act, Prevention of Accidental Releases.

5 "Chronic Hazardous Air Pollutant" means any noncarcinogenic
6 hazardous air pollutant for which a threshold limit value - time
7 weighted average (TLV-TWA) having no threshold limit value - ceiling
8 (TLV-C) has been adopted by the American Conference of Governmental
9 Industrial Hygienists (ACGIH) in its "Threshold Limit Values for
10 Chemical Substances and Physical Agents and Biological Exposure Indices,
11 (2009)."

12 "Clean Air Act" means federal Clean Air Act as found in 42 U.S.C.
13 Chapter 85.

14 "Clean Coal Technology" means any technology, including
15 technologies applied at the precombustion, combustion, or post
16 combustion stage, at a new or existing facility which will achieve
17 significant reductions in air emissions of sulfur dioxide or oxides of
18 nitrogen associated with the utilization of coal in the generation of
19 electricity, or process steam which was not in widespread use as of
20 November 15, 1990.

21 "Clean Coal Technology Demonstration Project" means a project
22 using funds appropriated under the heading "Department of Energy-Clean
23 Coal Technology," up to a total amount of \$2,500,000,000 for commercial
24 demonstration of clean coal technology, or similar projects funded
25 through appropriations for the Environmental Protection Agency. The
26 Federal contribution for a qualifying project shall be at least 20
27 percent of the total cost of the demonstration project.

28 "Clearing Index" means an indicator of the predicted rate of
29 clearance of ground level pollutants from a given area. This number is
30 provided by the National Weather Service.

31 "Coating" means a material that can be applied to a substrate and
32 which cures to form a continuous solid film for protective, decorative,
33 or functional purposes. Such materials include, but are not limited to,
34 paints, varnishes, sealants, adhesives, caulks, maskants, inks, and
35 temporary protective coatings.

36 "Commence" as applied to construction of a major source or major
37 modification means that the owner or operator has all necessary pre-
38 construction approvals or permits and either has:

39 (1) Begun, or caused to begin, a continuous program of actual on-
40 site construction of the source, to be completed within a reasonable
41 time; or

42 (2) Entered into binding agreements or contractual obligations,
43 which cannot be canceled or modified without substantial loss to the
44 owner or operator, to undertake a program of actual construction of the
45 source to be completed within a reasonable time.

46 "Composite vapor pressure" means the sum of the partial pressures
47 of the compounds defined as VOCs.

48 "Condensable PM2.5" means material that is vapor phase at stack
49 conditions, but which condenses and/or reacts upon cooling and dilution

1 in the ambient air to form solid or liquid particulate matter
2 immediately after discharge from the stack.

3 "Compliance Schedule" means a schedule of events, by date, which
4 will result in compliance with these regulations.

5 "Construction" means any physical change or change in the method
6 of operation including fabrication, erection, installation, demolition,
7 or modification of a source which would result in a change in actual
8 emissions.

9 "Control Apparatus" means any device which prevents or controls
10 the emission of any air pollutant directly or indirectly into the
11 outdoor atmosphere.

12 "Department" means Utah State Department of Environmental Quality.
13 See Section 19-1-103(1).

14 "Director" means the Director of the Division of Air Quality. See
15 Section 19-1-103(1).

16 "Division" means the Division of Air Quality.

17 "Electric Utility Steam Generating Unit" means any steam electric
18 generating unit that is constructed for the purpose of supplying more
19 than one-third of its potential electric output capacity and more than
20 25 MW electrical output to any utility power distribution system for
21 sale. Any steam supplied to a steam distribution system for the purpose
22 of providing steam to a steam-electric generator that would produce
23 electrical energy for sale is also considered in determining the
24 electrical energy output capacity of the affected facility.

25 "Emission" means the act of discharge into the atmosphere of an
26 air pollutant or an effluent which contains or may contain an air
27 pollutant; or the effluent so discharged into the atmosphere.

28 "Emissions Information" means, with reference to any source
29 operation, equipment or control apparatus:

30 (1) Information necessary to determine the identity, amount,
31 frequency, concentration, or other characteristics related to air
32 quality of any air pollutant which has been emitted by the source
33 operation, equipment, or control apparatus;

34 (2) Information necessary to determine the identity, amount,
35 frequency, concentration, or other characteristics (to the extent
36 related to air quality) of any air pollutant which, under an applicable
37 standard or limitation, the source operation was authorized to emit
38 (including, to the extent necessary for such purposes, a description of
39 the manner or rate of operation of the source operation), or any
40 combination of the foregoing; and

41 (3) A general description of the location and/or nature of the
42 source operation to the extent necessary to identify the source
43 operation and to distinguish it from other source operations (including,
44 to the extent necessary for such purposes, a description of the device,
45 installation, or operation constituting the source operation).

46 "Emission Limitation" means a requirement established by the
47 Board, the director or the Administrator, EPA, which limits the
48 quantity, rate or concentration of emission of air pollutants on a
49 continuous emission reduction including any requirement relating to the

1 operation or maintenance of a source to assure continuous emission
2 reduction (Section 302(k)).

3 "Emissions Unit" means any part of a stationary source which emits
4 or would have the potential to emit any pollutant subject to regulation
5 under the Clean Air Act.

6 "Enforceable" means all limitations and conditions which are
7 enforceable by the Administrator, including those requirements developed
8 pursuant to 40 CFR Parts 60 and 61, requirements within the State
9 Implementation Plan and R307, any permit requirements established
10 pursuant to 40 CFR 52.21 or R307-401.

11 "EPA" means Environmental Protection Agency.

12 "EPA Method 9" means 40 CFR Part 60, Appendix A, Method 9, "Visual
13 Determination of Opacity of Emissions from Stationary Sources," and
14 Alternate 1, "Determination of the opacity of emissions from stationary
15 sources remotely by LIDAR."

16 "Executive Director" means the Executive Director of the Utah
17 Department of Environmental Quality. See Section 19-1-103(2).

18 "Existing Installation" means an installation, construction of
19 which began prior to the effective date of any regulation having
20 application to it.

21 "Filterable PM2.5" means particles with an aerodynamic diameter
22 equal to or less than 2.5 micrometers that are directly emitted by a
23 source as a solid or liquid at stack or release conditions and can be
24 captured on the filter of a stack test train.

25 "Fireplace" means all devices both masonry or factory built units
26 (free standing fireplaces) with a hearth, fire chamber or similarly
27 prepared device connected to a chimney which provides the operator with
28 little control of combustion air, leaving its fire chamber fully or at
29 least partially open to the room. Fireplaces include those devices with
30 circulating systems, heat exchangers, or draft reducing doors with a net
31 thermal efficiency of no greater than twenty percent and are used for
32 aesthetic purposes.

33 "Fugitive Dust" means particulate, composed of soil and/or
34 industrial particulates such as ash, coal, minerals, etc., which becomes
35 airborne because of wind or mechanical disturbance of surfaces. Natural
36 sources of dust and fugitive emissions are not fugitive dust within the
37 meaning of this definition.

38 "Fugitive Emissions" means emissions from an installation or
39 facility which are neither passed through an air cleaning device nor
40 vented through a stack or could not reasonably pass through a stack,
41 chimney, vent, or other functionally equivalent opening.

42 "Garbage" means all putrescible animal and vegetable matter
43 resulting from the handling, preparation, cooking and consumption of
44 food, including wastes attendant thereto.

45 "Gasoline" means any petroleum distillate, used as a fuel for
46 internal combustion engines, having a Reid vapor pressure of 4 pounds or
47 greater.

48 "Hazardous Air Pollutant (HAP)" means any pollutant listed by the
49 EPA as a hazardous air pollutant in conformance with Section 112(b) of

1 the Clean Air Act. A list of these pollutants is available at the
2 Division of Air Quality.

3 "Household Waste" means any solid or liquid material normally
4 generated by the family in a residence in the course of ordinary day-to-
5 day living, including but not limited to garbage, paper products, rags,
6 leaves and garden trash.

7 "Incinerator" means a combustion apparatus designed for high
8 temperature operation in which solid, semisolid, liquid, or gaseous
9 combustible wastes are ignited and burned efficiently and from which the
10 solid and gaseous residues contain little or no combustible material.

11 "Installation" means a discrete process with identifiable
12 emissions which may be part of a larger industrial plant. Pollution
13 equipment shall not be considered a separate installation or
14 installations.

15 "LPG" means liquified petroleum gas such as propane or butane.

16 "Maintenance Area" means an area that is subject to the provisions
17 of a maintenance plan that is included in the Utah state implementation
18 plan, and that has been redesignated by EPA from nonattainment to
19 attainment of any National Ambient Air Quality Standard.

20 (a) The following areas are considered maintenance areas for
21 ozone:

22 (i) Salt Lake County, effective August 18, 1997; and

23 (ii) Davis County, effective August 18, 1997.

24 (b) The following areas are considered maintenance areas for
25 carbon monoxide:

26 (i) Salt Lake City, effective March 22, 1999;

27 (ii) Ogden City, effective May 8, 2001; and

28 (iii) Provo City, effective January 3, 2006.

29 (c) The following areas are considered maintenance areas for
30 PM10:

31 (i) Salt Lake County, effective on the date that EPA approves the
32 maintenance plan that was adopted by the Board on December 2, 2015; and

33 (ii) Utah County, effective on the date that EPA approves the
34 maintenance plan that was adopted by the Board on December 2, 2015; and

35 (iii) Ogden City, effective on the date that EPA approves the
36 maintenance plan that was adopted by the Board on December 2, 2015.

37 (d) The following area is considered a maintenance area for
38 sulfur dioxide: all of Salt Lake County and the eastern portion of
39 Tooele County above 5600 feet, effective on the date that EPA approves
40 the maintenance plan that was adopted by the Board on January 5, 2005.

41 "Major Modification" means any physical change in or change in the
42 method of operation of a major source that would result in a significant
43 net emissions increase of any pollutant. A net emissions increase that
44 is significant for volatile organic compounds shall be considered
45 significant for ozone. Within Salt Lake and Davis Counties or any
46 nonattainment area for ozone, a net emissions increase that is
47 significant for nitrogen oxides shall be considered significant for
48 ozone. Within areas of nonattainment for PM10, a significant net
49 emission increase for any PM10 precursor is also a significant net

1 emission increase for PM10. A physical change or change in the method
2 of operation shall not include:

3 (1) routine maintenance, repair and replacement;

4 (2) use of an alternative fuel or raw material by reason of an
5 order under section 2(a) and (b) of the Energy Supply and Environmental
6 Coordination Act of 1974, or by reason of a natural gas curtailment plan
7 pursuant to the Federal Power Act;

8 (3) use of an alternative fuel by reason of an order or rule
9 under section 125 of the federal Clean Air Act;

10 (4) use of an alternative fuel at a steam generating unit to the
11 extent that the fuel is generated from municipal solid waste;

12 (5) use of an alternative fuel or raw material by a source:

13 (a) which the source was capable of accommodating before January
14 6, 1975, unless such change would be prohibited under any enforceable
15 permit condition; or

16 (b) which the source is otherwise approved to use;

17 (6) an increase in the hours of operation or in the production
18 rate unless such change would be prohibited under any enforceable permit
19 condition;

20 (7) any change in ownership at a source

21 (8) the addition, replacement or use of a pollution control
22 project at an existing electric utility steam generating unit, unless
23 the director determines that such addition, replacement, or use renders
24 the unit less environmentally beneficial, or except:

25 (a) when the director has reason to believe that the pollution
26 control project would result in a significant net increase in
27 representative actual annual emissions of any criteria pollutant over
28 levels used for that source in the most recent air quality impact
29 analysis in the area conducted for the purpose of Title I of the Clean
30 Air Act, if any, and

31 (b) the director determines that the increase will cause or
32 contribute to a violation of any national ambient air quality standard
33 or PSD increment, or visibility limitation.

34 (9) the installation, operation, cessation, or removal of a
35 temporary clean coal technology demonstration project, provided that the
36 project complies with:

37 (a) the Utah State Implementation Plan; and

38 (b) other requirements necessary to attain and maintain the
39 national ambient air quality standards during the project and after it
40 is terminated.

41 "Major Source" means, to the extent provided by the federal Clean
42 Air Act as applicable to R307:

43 (1) any stationary source of air pollutants which emits, or has
44 the potential to emit, one hundred tons per year or more of any
45 pollutant subject to regulation under the Clean Air Act; or

46 (a) any source located in a nonattainment area for carbon
47 monoxide which emits, or has the potential to emit, carbon monoxide in
48 the amounts outlined in Section 187 of the federal Clean Air Act with
49 respect to the severity of the nonattainment area as outlined in Section

1 187 of the federal Clean Air Act; or

2 (b) any source located in Salt Lake or Davis Counties or in a
3 nonattainment area for ozone which emits, or has the potential to emit,
4 VOC or nitrogen oxides in the amounts outlined in Section 182 of the
5 federal Clean Air Act with respect to the severity of the nonattainment
6 area as outlined in Section 182 of the federal Clean Air Act; or

7 (c) any source located in a nonattainment area for PM10 which
8 emits, or has the potential to emit, PM10 or any PM10 precursor in the
9 amounts outlined in Section 189 of the federal Clean Air Act with
10 respect to the severity of the nonattainment area as outlined in Section
11 189 of the federal Clean Air Act.

12 (2) any physical change that would occur at a source not
13 qualifying under subpart 1 as a major source, if the change would
14 constitute a major source by itself;

15 (3) the fugitive emissions and fugitive dust of a stationary
16 source shall not be included in determining for any of the purposes of
17 these R307 rules whether it is a major stationary source, unless the
18 source belongs to one of the following categories of stationary sources:

19 (a) Coal cleaning plants (with thermal dryers);

20 (b) Kraft pulp mills;

21 (c) Portland cement plants;

22 (d) Primary zinc smelters;

23 (e) Iron and steel mills;

24 (f) Primary aluminum or reduction plants;

25 (g) Primary copper smelters;

26 (h) Municipal incinerators capable of charging more than 250 tons
27 of refuse per day;

28 (i) Hydrofluoric, sulfuric, or nitric acid plants;

29 (j) Petroleum refineries;

30 (k) Lime plants;

31 (l) Phosphate rock processing plants;

32 (m) Coke oven batteries;

33 (n) Sulfur recovery plants;

34 (o) Carbon black plants (furnace process);

35 (p) Primary lead smelters;

36 (q) Fuel conversion plants;

37 (r) Sintering plants;

38 (s) Secondary metal production plants;

39 (t) Chemical process plants;

40 (u) Fossil-fuel boilers (or combination thereof) totaling more
41 than 250 million British Thermal Units per hour heat input;

42 (v) Petroleum storage and transfer units with a total storage
43 capacity exceeding 300,000 barrels;

44 (w) Taconite ore processing plants;

45 (x) Glass fiber processing plants;

46 (y) Charcoal production plants;

47 (z) Fossil fuel-fired steam electric plants of more than 250
48 million British Thermal Units per hour heat input;

49 (aa) Any other stationary source category which, as of August 7,

1 1980, is being regulated under section 111 or 112 of the federal Clean
2 Air Act.

3 "Modification" means any planned change in a source which results
4 in a potential increase of emission.

5 "National Ambient Air Quality Standards (NAAQS)" means the
6 allowable concentrations of air pollutants in the ambient air specified
7 by the Federal Government (Title 40, Code of Federal Regulations, Part
8 50).

9 "Net Emissions Increase" means the amount by which the sum of the
10 following exceeds zero:

11 (1) any increase in actual emissions from a particular physical
12 change or change in method of operation at a source; and

13 (2) any other increases and decreases in actual emissions at the
14 source that are contemporaneous with the particular change and are
15 otherwise creditable. For purposes of determining a "net emissions
16 increase":

17 (a) An increase or decrease in actual emissions is
18 contemporaneous with the increase from the particular change only if it
19 occurs between the date five years before construction on the particular
20 change commences; and the date that the increase from the particular
21 change occurs.

22 (b) An increase or decrease in actual emissions is creditable
23 only if it has not been relied on in issuing a prior approval for the
24 source which approval is in effect when the increase in actual emissions
25 for the particular change occurs.

26 (c) An increase or decrease in actual emission of sulfur dioxide,
27 nitrogen oxides or particulate matter which occurs before an applicable
28 minor source baseline date is creditable only if it is required to be
29 considered in calculating the amount of maximum allowable increases
30 remaining available. With respect to particulate matter, only PM10
31 emissions will be used to evaluate this increase or decrease.

32 (d) An increase in actual emissions is creditable only to the
33 extent that the new level of actual emissions exceeds the old level.

34 (e) A decrease in actual emissions is creditable only to the
35 extent that:

36 (i) The old level of actual emissions or the old level of
37 allowable emissions, whichever is lower, exceeds the new level of actual
38 emissions;

39 (ii) It is enforceable at and after the time that actual
40 construction on the particular change begins; and

41 (iii) It has approximately the same qualitative significance for
42 public health and welfare as that attributed to the increase from the
43 particular change.

44 (iv) It has not been relied on in issuing any permit under R307-
45 401 nor has it been relied on in demonstrating attainment or reasonable
46 further progress.

47 (f) An increase that results from a physical change at a source
48 occurs when the emissions unit on which construction occurred becomes
49 operational and begins to emit a particular pollutant. Any replacement

1 unit that requires shakedown becomes operational only after a reasonable
2 shakedown period, not to exceed 180 days.

3 "New Installation" means an installation, construction of which
4 began after the effective date of any regulation having application to
5 it.

6 "Nonattainment Area" means an area designated by the Environmental
7 Protection Agency as nonattainment under Section 107, Clean Air Act for
8 any National Ambient Air Quality Standard. The designations for Utah are
9 listed in 40 CFR 81.345.

10 "Offset" means an amount of emission reduction, by a source,
11 greater than the emission limitation imposed on such source by these
12 regulations and/or the State Implementation Plan.

13 "Opacity" means the capacity to obstruct the transmission of
14 light, expressed as percent.

15 "Open Burning" means any burning of combustible materials
16 resulting in emission of products of combustion into ambient air without
17 passage through a chimney or stack.

18 "Owner or Operator" means any person who owns, leases, controls,
19 operates or supervises a facility, an emission source, or air pollution
20 control equipment.

21 "PSD" Area means an area designated as attainment or
22 unclassifiable under section 107(d)(1)(D) or (E) of the federal Clean
23 Air Act.

24 "PM2.5" means particulate matter with an aerodynamic diameter less
25 than or equal to a nominal 2.5 micrometers as measured by an EPA
26 reference or equivalent method.

27 "PM2.5 Precursor" means any chemical compound or substance which,
28 after it has been emitted into the atmosphere, undergoes chemical or
29 physical changes that convert it into particulate matter, specifically
30 PM2.5.

31 (1) Specifically, Sulfur dioxide, Nitrogen oxides, Volatile
32 organic compounds and Ammonia are precursors to PM2.5 in any PM2.5
33 nonattainment area, except where the Administrator of the EPA has
34 approved a demonstration satisfying 40 CFR 51.1006(a)(3) which has, for
35 a particular PM2.5 nonattainment area, determined otherwise.

36 (2) The following subparagraphs denote specific nonattainment
37 areas (as defined in the July 1, 2017 version of 40 CFR 81.345), within
38 which certain pollutants identified in paragraph (1) are exempted from
39 the definition of PM2.5 precursor for the purposes of 40 CFR 51.165

40 (a) In the Logan UT-ID PM2.5 nonattainment area - Ammonia is
41 exempted.

42 "PM10" means particulate matter with an aerodynamic diameter less
43 than or equal to a nominal 10 micrometers as measured by an EPA
44 reference or equivalent method.

45 "PM10 Precursor" means any chemical compound or substance which,
46 after it has been emitted into the atmosphere, undergoes chemical or
47 physical changes that convert it into particulate matter, specifically
48 PM10.

49 "Part 70 Source" means any source subject to the permitting

1 requirements of R307-415.

2 "Person" means an individual, trust, firm, estate, company,
3 corporation, partnership, association, state, state or federal agency or
4 entity, municipality, commission, or political subdivision of a state.
5 (Subsection 19-2-103(4)).

6 "Pollution Control Project" means any activity or project at an
7 existing electric utility steam generating unit for purposes of reducing
8 emissions from such unit. Such activities or projects are limited to:

9 (1) The installation of conventional or innovative pollution
10 control technology, including but not limited to advanced flue gas
11 desulfurization, sorbent injection for sulfur dioxide and nitrogen
12 oxides controls and electrostatic precipitators;

13 (2) An activity or project to accommodate switching to a fuel
14 which is less polluting than the fuel used prior to the activity or
15 project, including, but not limited to natural gas or coal reburning, or
16 the cofiring of natural gas and other fuels for the purpose of
17 controlling emissions;

18 (3) A permanent clean coal technology demonstration project
19 conducted under Title II, sec. 101(d) of the Further Continuing
20 Appropriations Act of 1985 (sec. 5903(d) of title 42 of the United
21 States Code), or subsequent appropriations, up to a total amount of
22 \$2,500,000,000 for commercial demonstration of clean coal technology, or
23 similar projects funded through appropriations for the Environmental
24 Protection Agency; or

25 (4) A permanent clean coal technology demonstration project that
26 constitutes a repowering project.

27 "Potential to Emit" means the maximum capacity of a source to emit
28 a pollutant under its physical and operational design. Any physical or
29 operational limitation on the capacity of the source to emit a pollutant
30 including air pollution control equipment and restrictions on hours of
31 operation or on the type or amount of material combusted, stored, or
32 processed shall be treated as part of its design if the limitation or
33 the effect it would have on emissions is enforceable. Secondary
34 emissions do not count in determining the potential to emit of a
35 stationary source.

36 "Primary PM2.5" means the sum of filterable PM2.5 and condensable
37 PM2.5.

38 "Process Level" means the operation of a source, specific to the
39 kind or type of fuel, input material, or mode of operation.

40 "Process Rate" means the quantity per unit of time of any raw
41 material or process intermediate consumed, or product generated, through
42 the use of any equipment, source operation, or control apparatus. For a
43 stationary internal combustion unit or any other fuel burning equipment,
44 this term may be expressed as the quantity of fuel burned per unit of
45 time.

46 "Reactivation of a Very Clean Coal-Fired Electric Utility Steam
47 Generating Unit" means any physical change or change in the method of
48 operation associated with the commencement of commercial operations by a
49 coal-fired utility unit after a period of discontinued operation where

1 the unit:

2 (1) Has not been in operation for the two-year period prior to
3 the enactment of the Clean Air Act Amendments of 1990, and the emissions
4 from such unit continue to be carried in the emission inventory at the
5 time of enactment;

6 (2) Was equipped prior to shutdown with a continuous system of
7 emissions control that achieves a removal efficiency for sulfur dioxide
8 of no less than 85 percent and a removal efficiency for particulates of
9 no less than 98 percent;

10 (3) Is equipped with low-NOx burners prior to the time of
11 commencement of operations following reactivation; and

12 (4) Is otherwise in compliance with the requirements of the Clean
13 Air Act.

14 "Reasonable Further Progress" means annual incremental reductions
15 in emission of an air pollutant which are sufficient to provide for
16 attainment of the NAAQS by the date identified in the State
17 Implementation Plan.

18 "Refuse" means solid wastes, such as garbage and trash.

19 "Regulated air pollutant" means any of the following:

20 (a) Nitrogen oxides or any volatile organic compound;

21 (b) Any pollutant for which a national ambient air quality
22 standard has been promulgated;

23 (c) Any pollutant that is subject to any standard promulgated
24 under Section 111 of the Act, Standards of Performance for New
25 Stationary Sources;

26 (d) Any Class I or II substance subject to a standard promulgated
27 under or established by Title VI of the Act, Stratospheric Ozone
28 Protection;

29 (e) Any pollutant subject to a standard promulgated under Section
30 112, Hazardous Air Pollutants, or other requirements established under
31 Section 112 of the Act, including Sections 112(g), (j), and (r) of the
32 Act, including any of the following:

33 (i) Any pollutant subject to requirements under Section 112(j) of
34 the Act, Equivalent Emission Limitation by Permit. If the Administrator
35 fails to promulgate a standard by the date established pursuant to
36 Section 112(e) of the Act, any pollutant for which a subject source
37 would be major shall be considered to be regulated on the date 18 months
38 after the applicable date established pursuant to Section 112(e) of the
39 Act;

40 (ii) Any pollutant for which the requirements of Section
41 112(g)(2) of the Act (Construction, Reconstruction and Modification)
42 have been met, but only with respect to the individual source subject to
43 Section 112(g)(2) requirement.

44 "Repowering" means replacement of an existing coal-fired boiler
45 with one of the following clean coal technologies: atmospheric or
46 pressurized fluidized bed combustion, integrated gasification combined
47 cycle, magnetohydrodynamics, direct and indirect coal-fired turbines,
48 integrated gasification fuel cells, or as determined by the
49 Administrator, in consultation with the Secretary of Energy, a

1 derivative of one or more of these technologies, and any other
2 technology capable of controlling multiple combustion emissions
3 simultaneously with improved boiler or generation efficiency and with
4 significantly greater waste reduction relative to the performance of
5 technology in widespread commercial use as of November 15, 1990.

6 (1) Repowering shall also include any oil and/or gas-fired unit
7 which has been awarded clean coal technology demonstration funding as of
8 January 1, 1991, by the Department of Energy.

9 (2) The director shall give expedited consideration to permit
10 applications for any source that satisfies the requirements of this
11 definition and is granted an extension under section 409 of the Clean
12 Air Act.

13 "Representative Actual Annual Emissions" means the average rate,
14 in tons per year, at which the source is projected to emit a pollutant
15 for the two-year period after a physical change or change in the method
16 of operation of unit, (or a different consecutive two-year period within
17 10 years after that change, where the director determines that such
18 period is more representative of source operations), considering the
19 effect any such change will have on increasing or decreasing the hourly
20 emissions rate and on projected capacity utilization. In projecting
21 future emissions the director shall:

22 (1) Consider all relevant information, including but not limited
23 to, historical operational data, the company's own representations,
24 filings with the State of Federal regulatory authorities, and compliance
25 plans under title IV of the Clean Air Act; and

26 (2) Exclude, in calculating any increase in emissions that
27 results from the particular physical change or change in the method of
28 operation at an electric utility steam generating unit, that portion of
29 the unit's emissions following the change that could have been
30 accommodated during the representative baseline period and is
31 attributable to an increase in projected capacity utilization at the
32 unit that is unrelated to the particular change, including any increased
33 utilization due to the rate of electricity demand growth for the utility
34 system as a whole.

35 "Residence" means a dwelling in which people live, including all
36 ancillary buildings.

37 "Residential Solid Fuel Burning" device means any residential
38 burning device except a fireplace connected to a chimney that burns
39 solid fuel and is capable of, and intended for use as a space heater,
40 domestic water heater, or indoor cooking appliance, and has an air-to-
41 fuel ratio less than 35-to-1 as determined by the test procedures
42 prescribed in 40 CFR 60.534. It must also have a useable firebox volume
43 of less than 6.10 cubic meters or 20 cubic feet, a minimum burn rate
44 less than 5 kilograms per hour or 11 pounds per hour as determined by
45 test procedures prescribed in 40 CFR 60.534, and weigh less than 800
46 kilograms or 362.9 pounds. Appliances that are described as
47 prefabricated fireplaces and are designed to accommodate doors or other
48 accessories that would create the air starved operating conditions of a
49 residential solid fuel burning device shall be considered as such.

1 Fireplaces are not included in this definition for solid fuel burning
2 devices.

3 "Road" means any public or private road.

4 "Salvage Operation" means any business, trade or industry engaged
5 in whole or in part in salvaging or reclaiming any product or material,
6 including but not limited to metals, chemicals, shipping containers or
7 drums.

8 "Secondary Emissions" means emissions which would occur as a
9 result of the construction or operation of a major source or major
10 modification, but do not come from the major source or major
11 modification itself.

12 Secondary emissions must be specific, well defined, quantifiable,
13 and impact the same general area as the source or modification which
14 causes the secondary emissions. Secondary emissions include emissions
15 from any off-site support facility which would not be constructed or
16 increase its emissions except as a result of the construction or
17 operation of the major source or major modification. Secondary
18 emissions do not include any emissions which come directly from a mobile
19 source such as emissions from the tailpipe of a motor vehicle, from a
20 train, or from a vessel.

21 Fugitive emissions and fugitive dust from the source or
22 modification are not considered secondary emissions.

23 "Secondary PM2.5" means particles that form or grow in mass
24 through chemical reactions in the ambient air well after dilution and
25 condensation have occurred. Secondary PM2.5 is usually formed at some
26 distance downwind from the source.

27 "Significant" means:

28 (1) In reference to a net emissions increase or the potential of
29 a source to emit any of the following pollutants, a rate of emissions
30 that would equal or exceed any of the following rates:

31 Carbon monoxide: 100 ton per year (tpy);

32 Nitrogen oxides: 40 tpy;

33 Sulfur dioxide: 40 tpy;

34 PM10: 15 tpy;

35 PM2.5: 10 tpy;

36 Particulate matter: 25 tpy;

37 Ozone: 40 tpy of volatile organic compounds;

38 Lead: 0.6 tpy.

39 "Solid Fuel" means wood, coal, and other similar organic material
40 or combination of these materials.

41 "Solvent" means organic materials which are liquid at standard
42 conditions (Standard Temperature and Pressure) and which are used as
43 dissolvers, viscosity reducers, or cleaning agents.

44 "Source" means any structure, building, facility, or installation
45 which emits or may emit any air pollutant subject to regulation under
46 the Clean Air Act and which is located on one or more continuous or
47 adjacent properties and which is under the control of the same person or
48 persons under common control. A building, structure, facility, or
49 installation means all of the pollutant-emitting activities which belong

1 to the same industrial grouping. Pollutant-emitting activities shall be
2 considered as part of the same industrial grouping if they belong to the
3 same "Major Group" (i.e. which have the same two-digit code) as
4 described in the Standard Industrial Classification Manual, 1972, as
5 amended by the 1977 Supplement (US Government Printing Office stock
6 numbers 4101-0065 and 003-005-00176-0, respectively).

7 "Stack" means any point in a source designed to emit solids,
8 liquids, or gases into the air, including a pipe or duct but not
9 including flares.

10 "Standards of Performance for New Stationary Sources" means the
11 Federally established requirements for performance and record keeping
12 (Title 40 Code of Federal Regulations, Part 60).

13 "State" means Utah State.

14 "Temporary" means not more than 180 calendar days.

15 "Temporary Clean Coal Technology Demonstration Project" means a
16 clean coal technology demonstration project that is operated for a
17 period of 5 years or less, and which complies with the Utah State
18 Implementation Plan and other requirements necessary to attain and
19 maintain the national ambient air quality standards during the project
20 and after it is terminated.

21 "Threshold Limit Value - Ceiling (TLV-C)" means the airborne
22 concentration of a substance which may not be exceeded, as adopted by
23 the American Conference of Governmental Industrial Hygienists in its
24 "Threshold Limit Values for Chemical Substances and Physical Agents and
25 Biological Exposure Indices, (2009)."

26 "Threshold Limit Value - Time Weighted Average (TLV-TWA)" means
27 the time-weighted airborne concentration of a substance adopted by the
28 American Conference of Governmental Industrial Hygienists in its
29 "Threshold Limit Values for Chemical Substances and Physical Agents and
30 Biological Exposure Indices, (2009)."

31 "Total Suspended Particulate (TSP)" means minute separate
32 particles of matter, collected by high volume sampler.

33 "Toxic Screening Level" means an ambient concentration of an air
34 pollutant equal to a threshold limit value - ceiling (TLV- C) or
35 threshold limit value -time weighted average (TLV-TWA) divided by a
36 safety factor.

37 "Trash" means solids not considered to be highly flammable or
38 explosive including, but not limited to clothing, rags, leather,
39 plastic, rubber, floor coverings, excelsior, tree leaves, yard trimmings
40 and other similar materials.

41 "VOC content" means the weight of VOC per volume of material and
42 is calculated by the following equation in gram/liter (or alternately in
43 pound/gallon, or pound/pound):

$$44 \quad \text{Grams of VOC per Liter of Material} = \frac{W_s - W_w - W_{es}}{V_m}$$

45 Where:

46 W_s = weight of volatile organic compounds

47 W_w = weight of water

48 W_{es} = weight of exempt compounds

49 V_m = volume of material

1 "Volatile Organic Compound (VOC)" means VOC as defined in 40 CFR
2 51.100(s), effective as of the date referenced in R307-101-3, is hereby
3 adopted and incorporated by reference.

4 "Waste" means all solid, liquid or gaseous material, including,
5 but not limited to, garbage, trash, household refuse, construction or
6 demolition debris, or other refuse including that resulting from the
7 prosecution of any business, trade or industry.

8 "Zero Drift" means the change in the instrument meter readout over
9 a stated period of time of normal continuous operation when the VOC
10 concentration at the time of measurement is zero.

11 ---

12 **KEY: air pollution, definitions**

13 **Date of Enactment or Last Substantive Amendment: , 2019**

14 **Notice of Continuation: May 8, 2014**

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

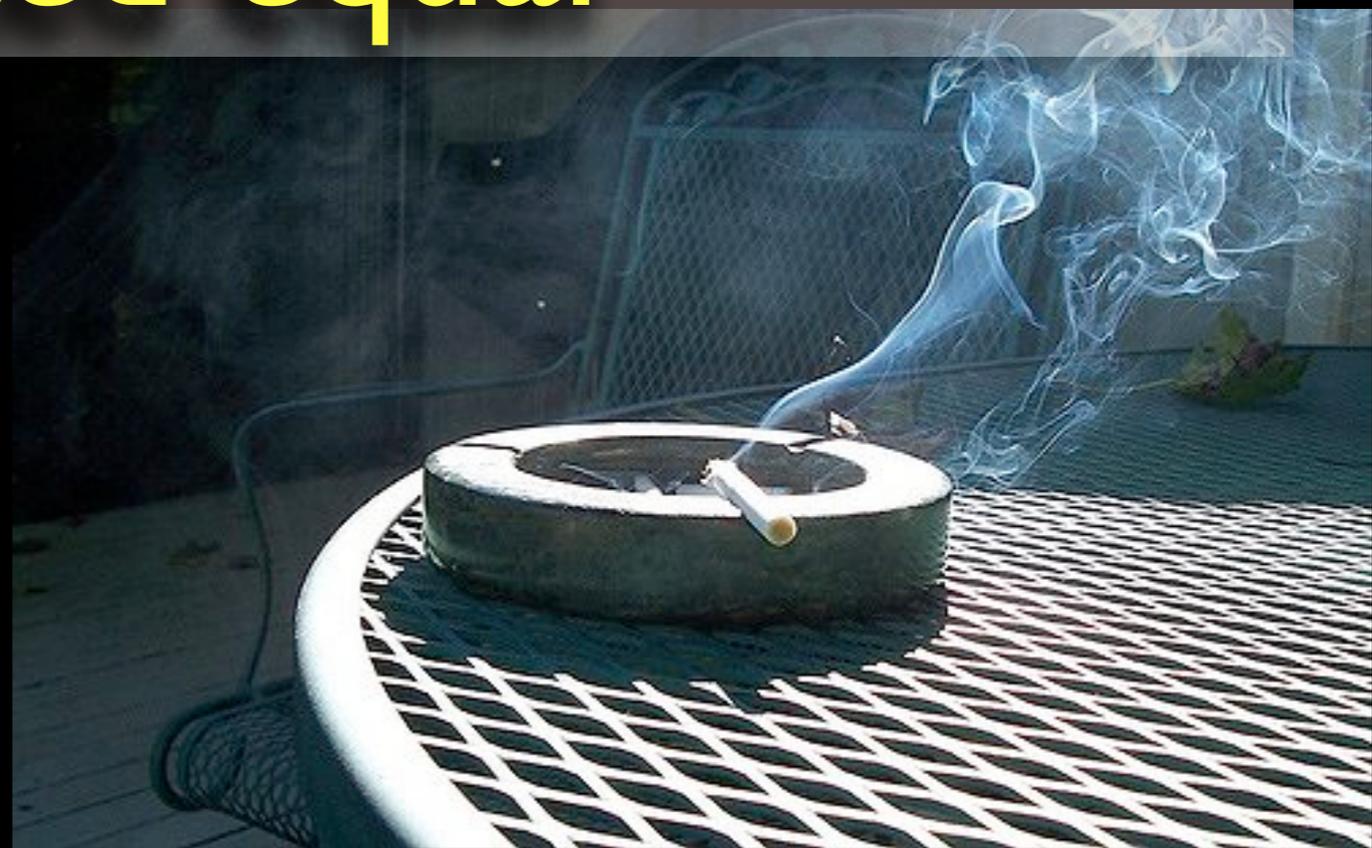
ITEM 5

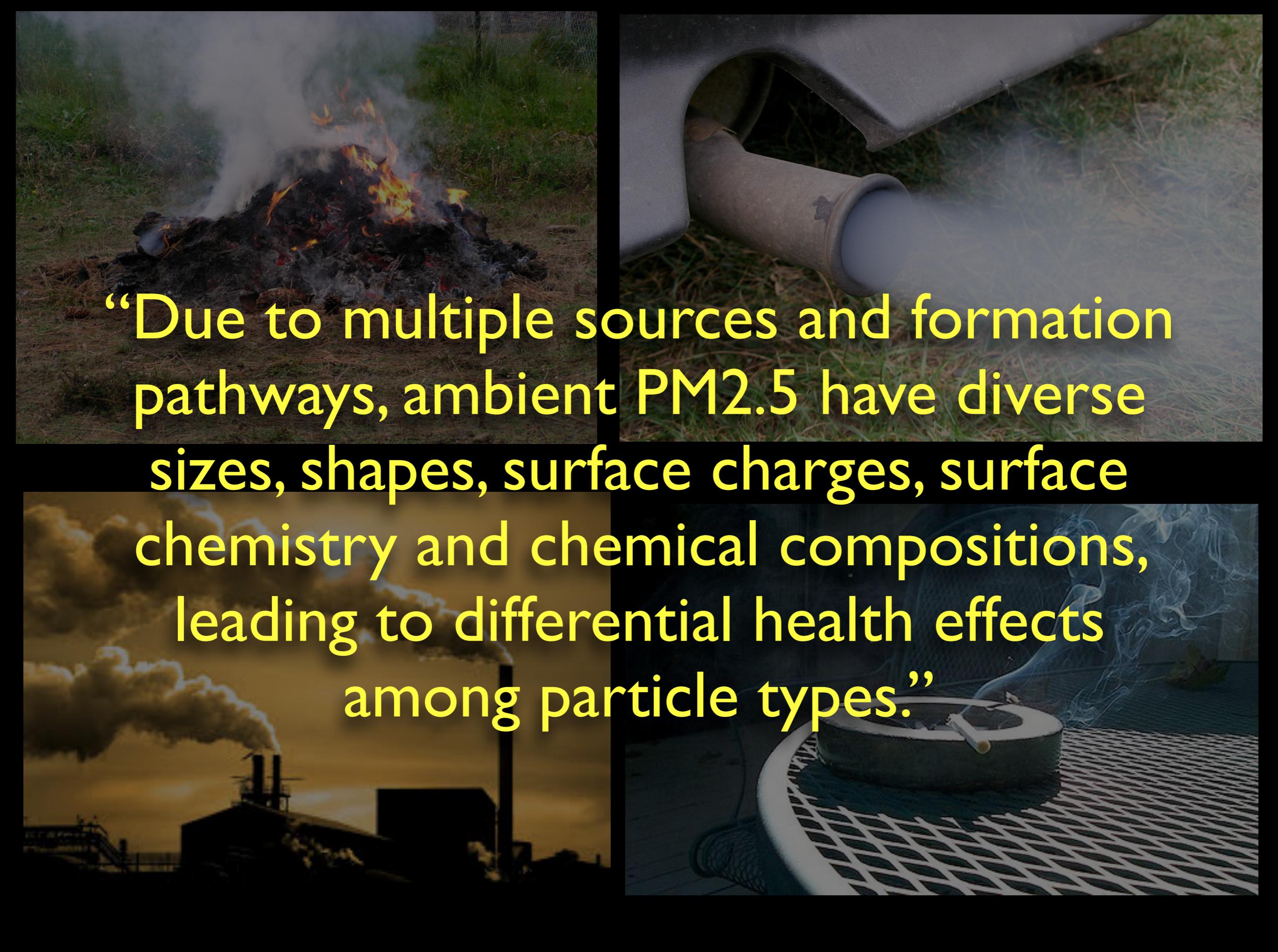
Utah Physicians for a Healthy Environment



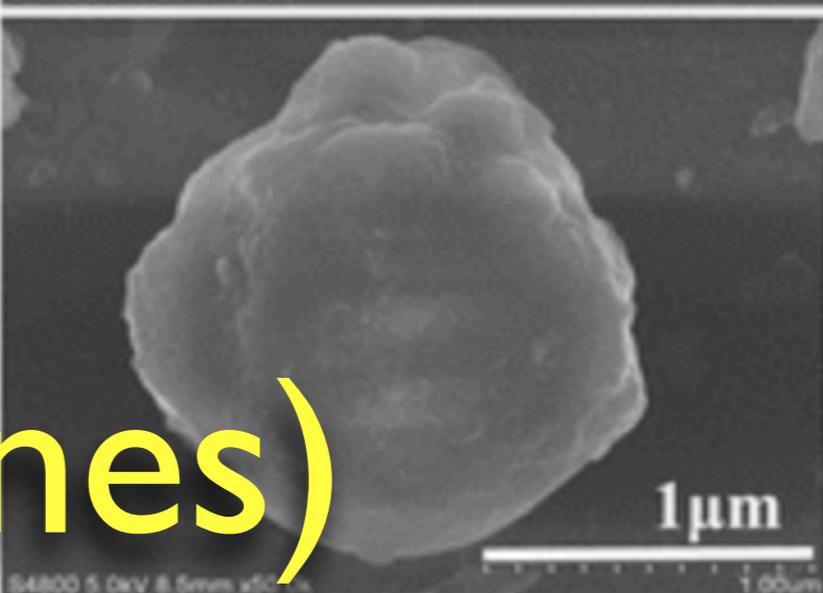
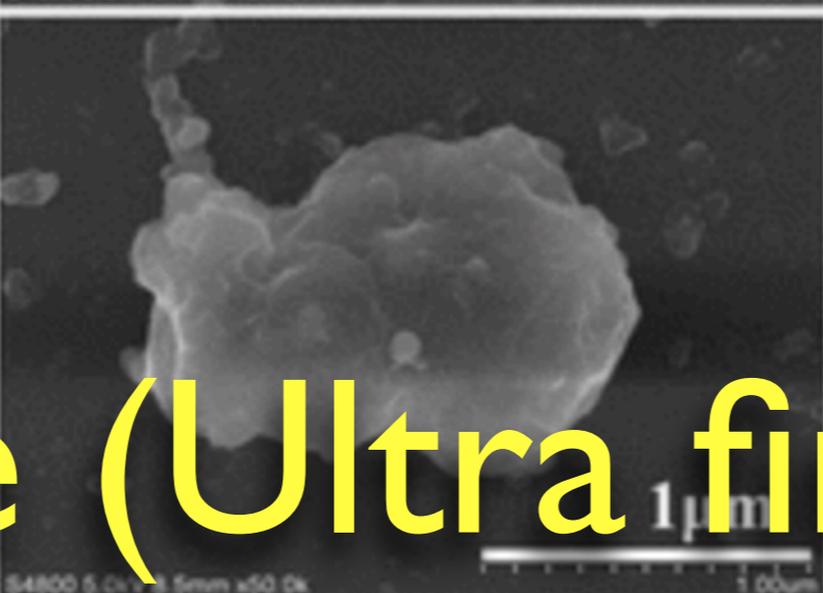
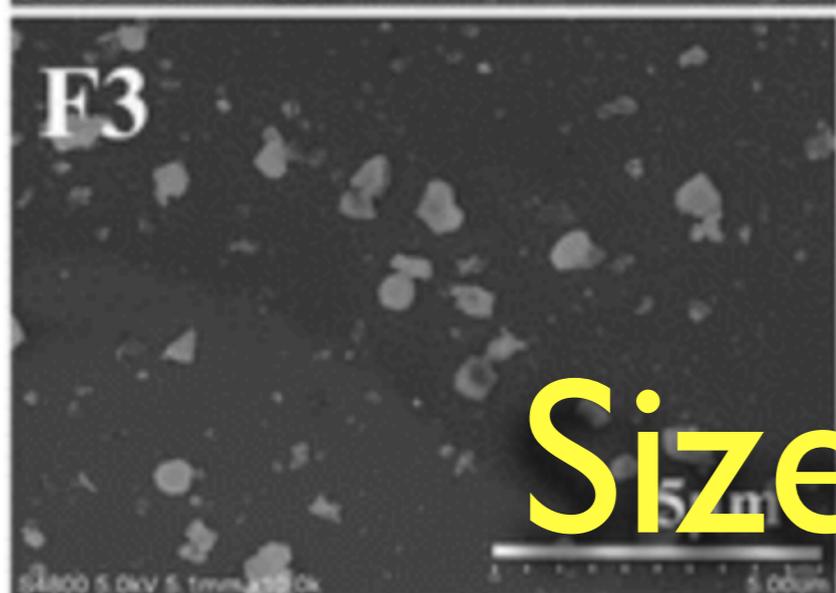
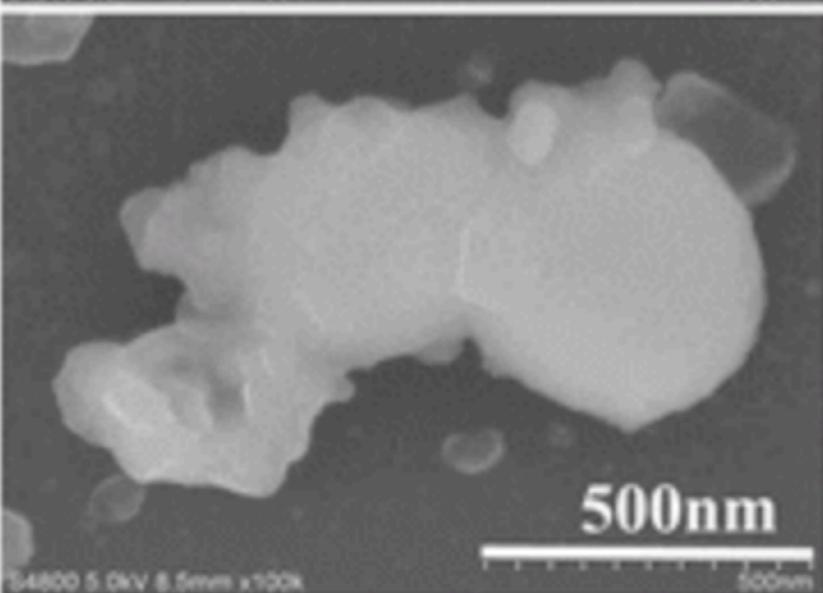
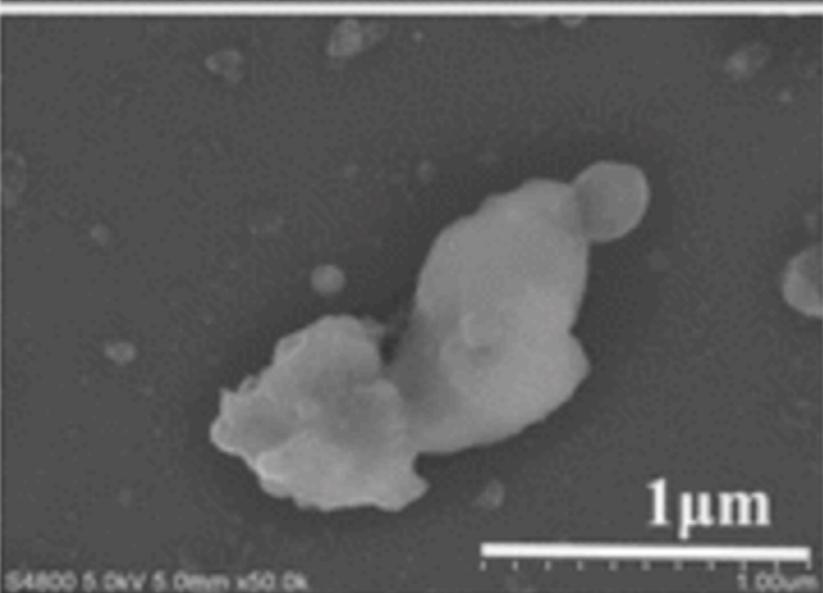
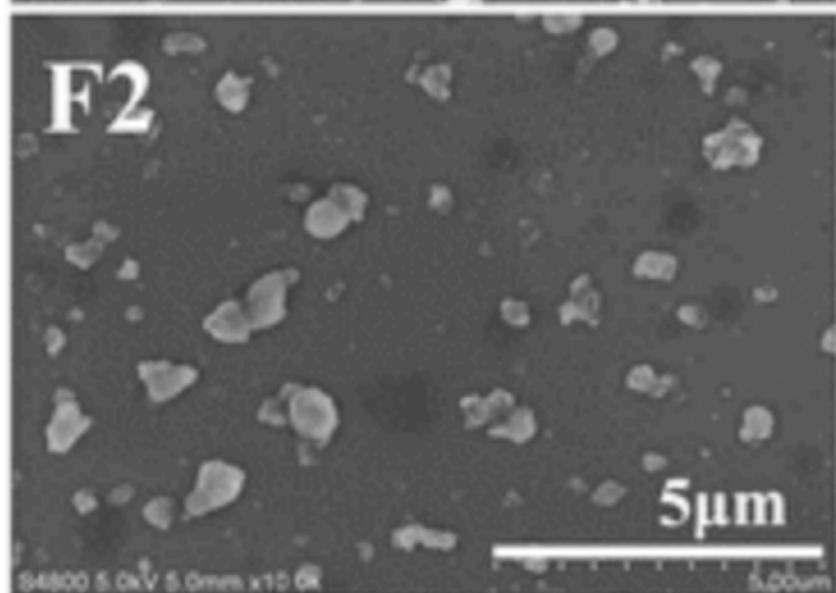
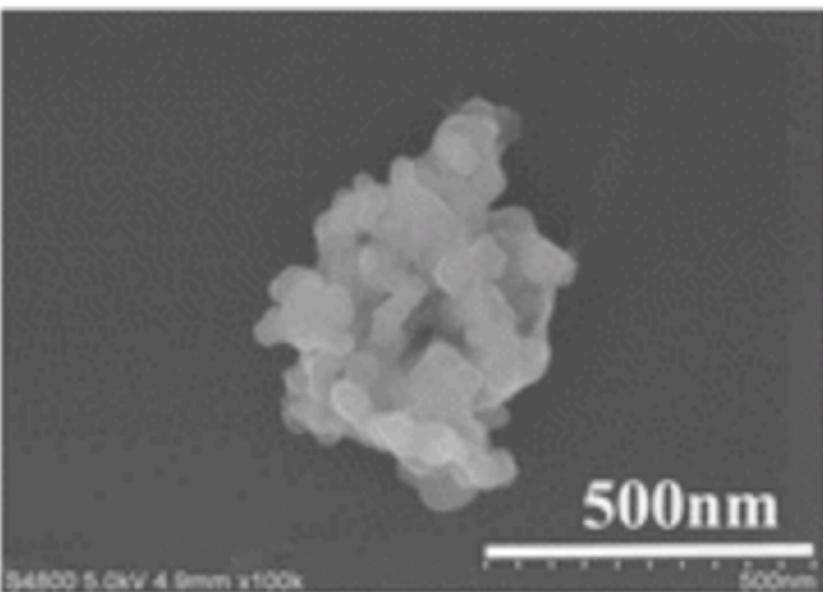
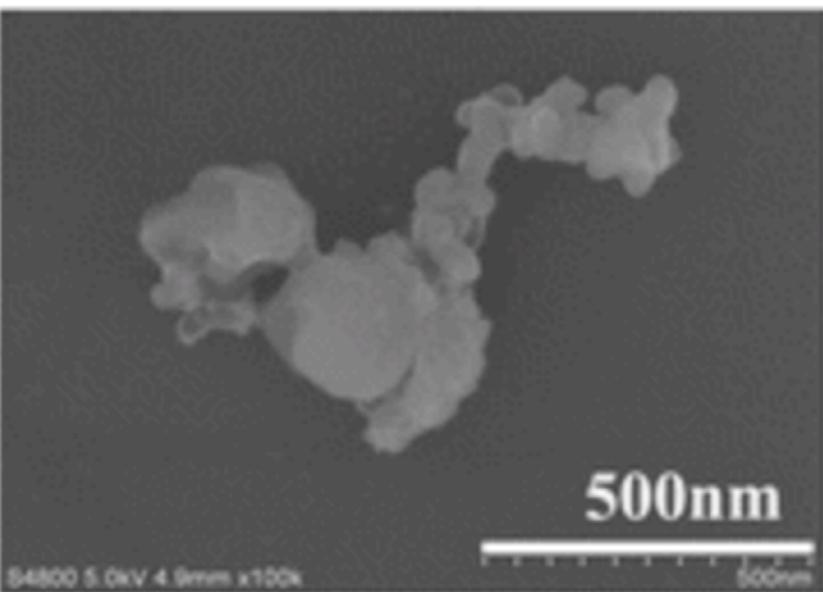
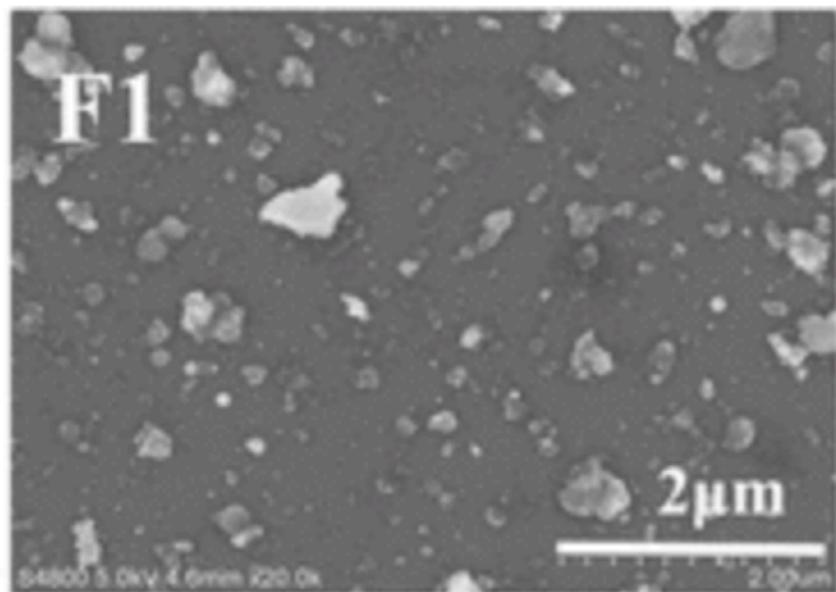


Not all particulate pollution
is created equal

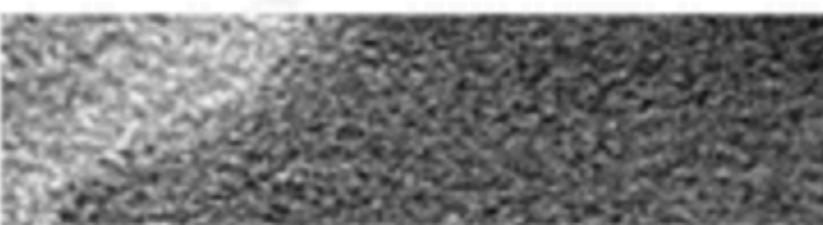
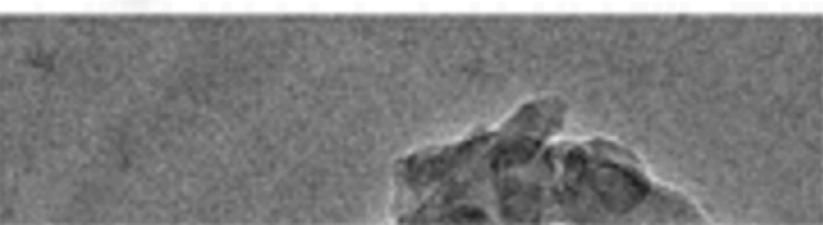
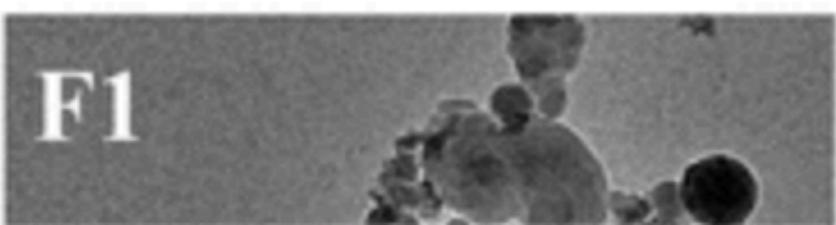




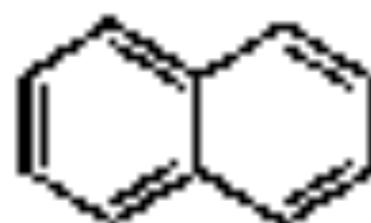
“Due to multiple sources and formation pathways, ambient PM_{2.5} have diverse sizes, shapes, surface charges, surface chemistry and chemical compositions, leading to differential health effects among particle types.”



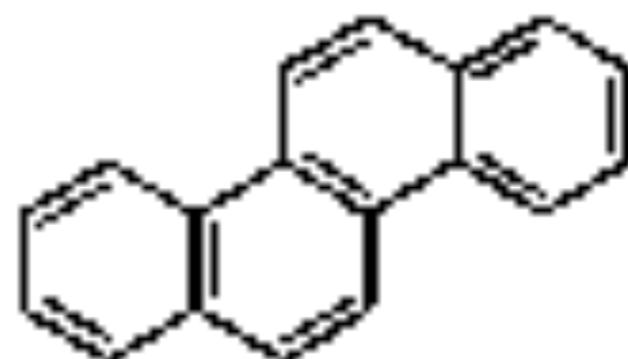
Size (Ultra fines)



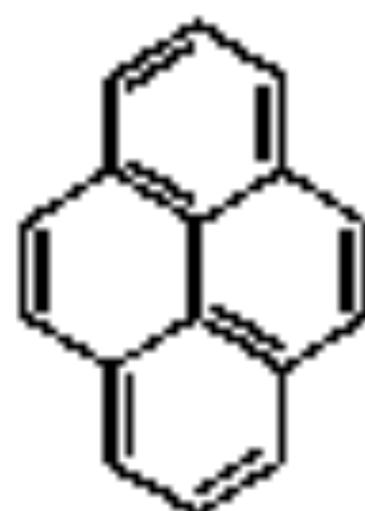
Polycyclic Aromatic Hydrocarbons



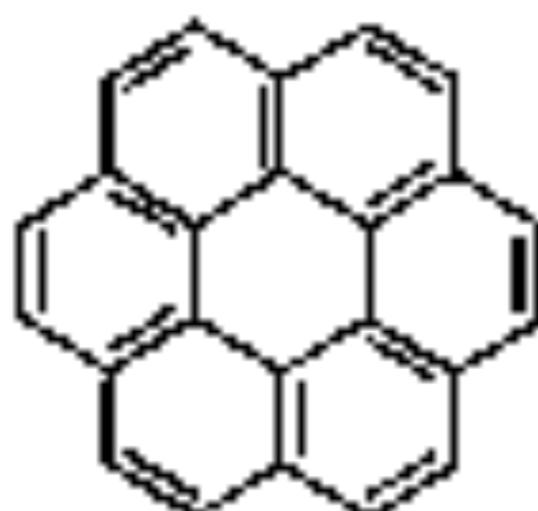
Naphthalene
C₁₀H₈



Chrysene
C₁₈H₁₂



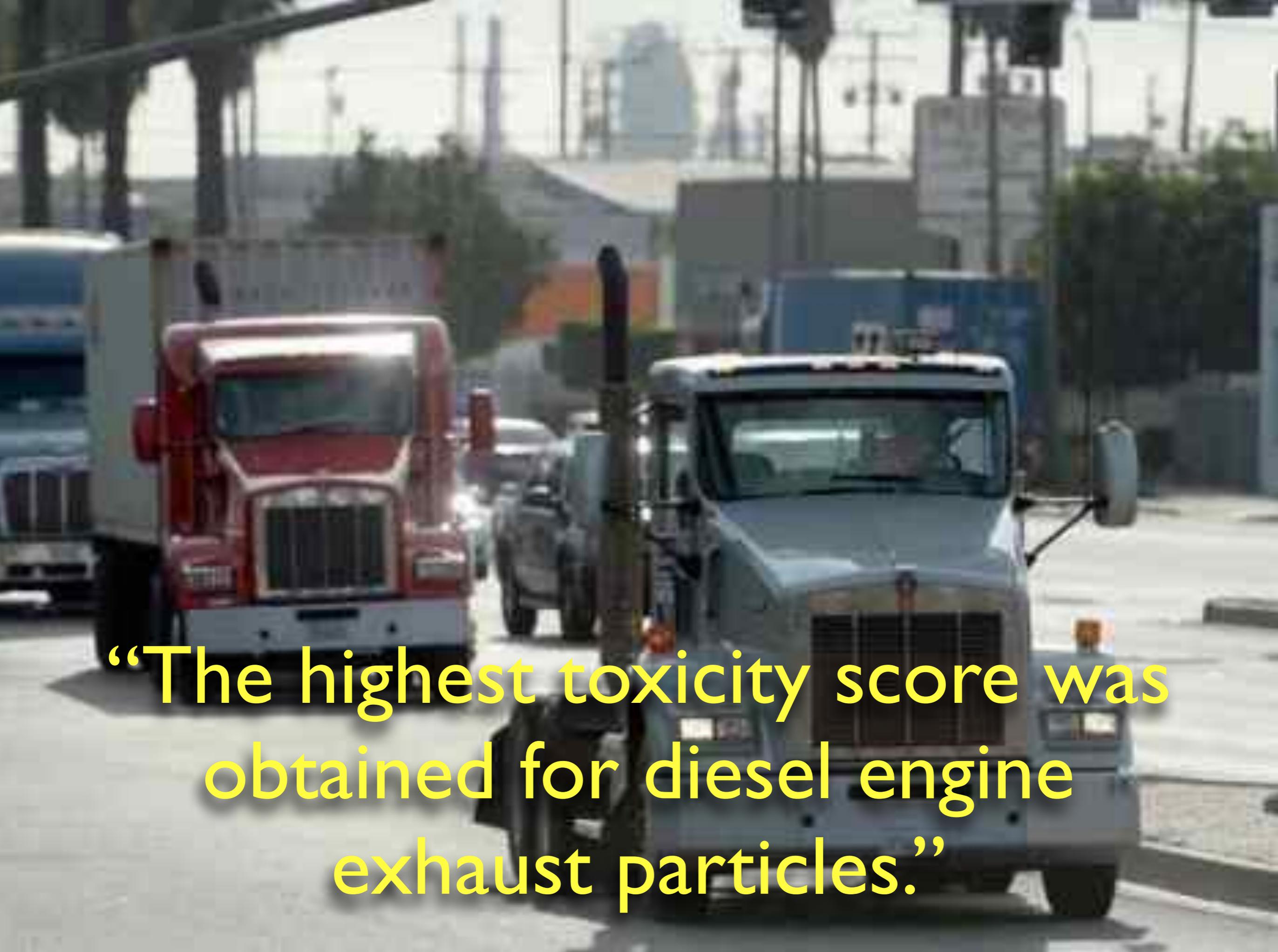
Pyrene
C₁₆H₁₀



Coronene
C₂₄H₁₂



Ovalene
C₃₂H₁₄

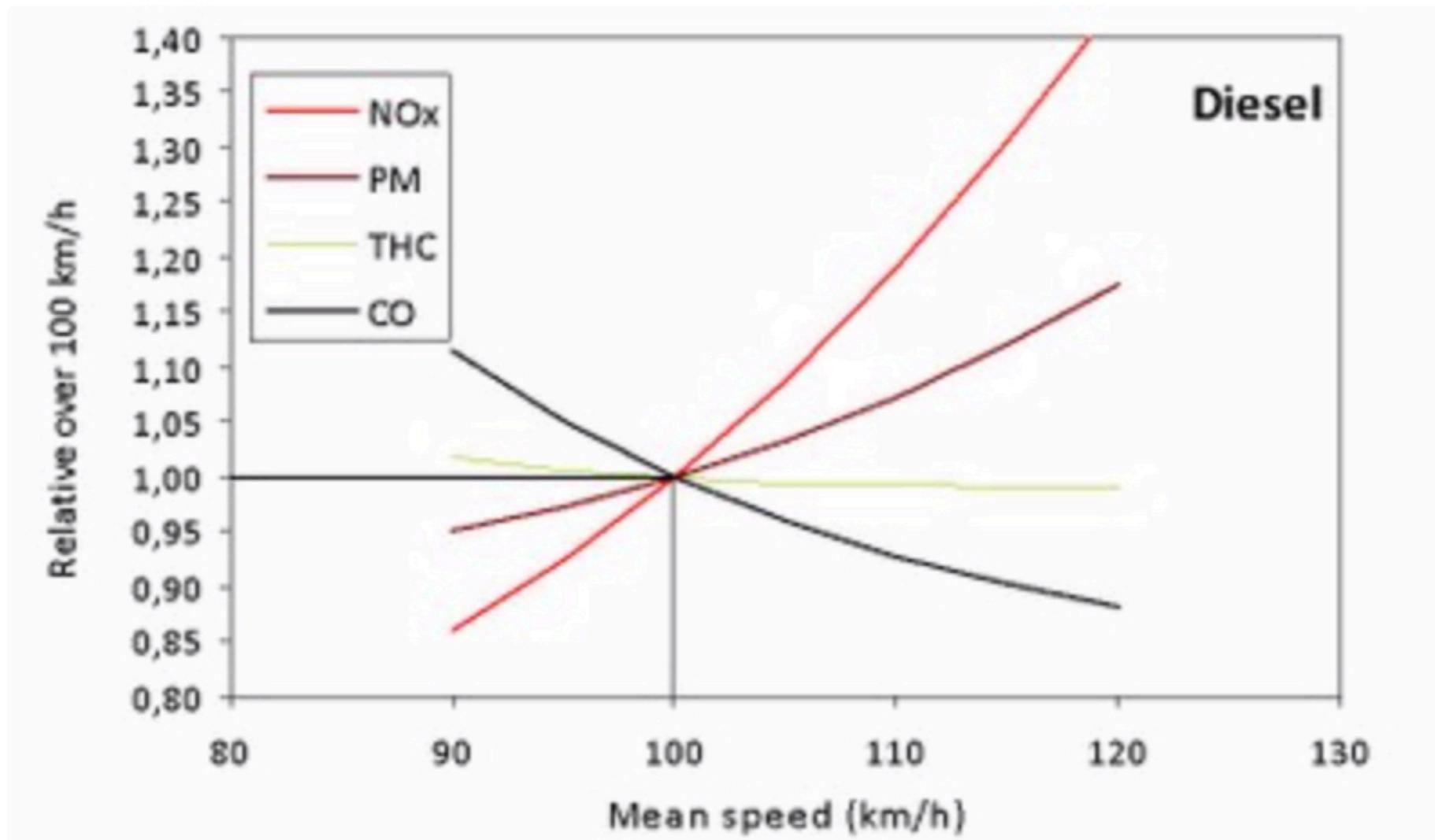


“The highest toxicity score was obtained for diesel engine exhaust particles.”



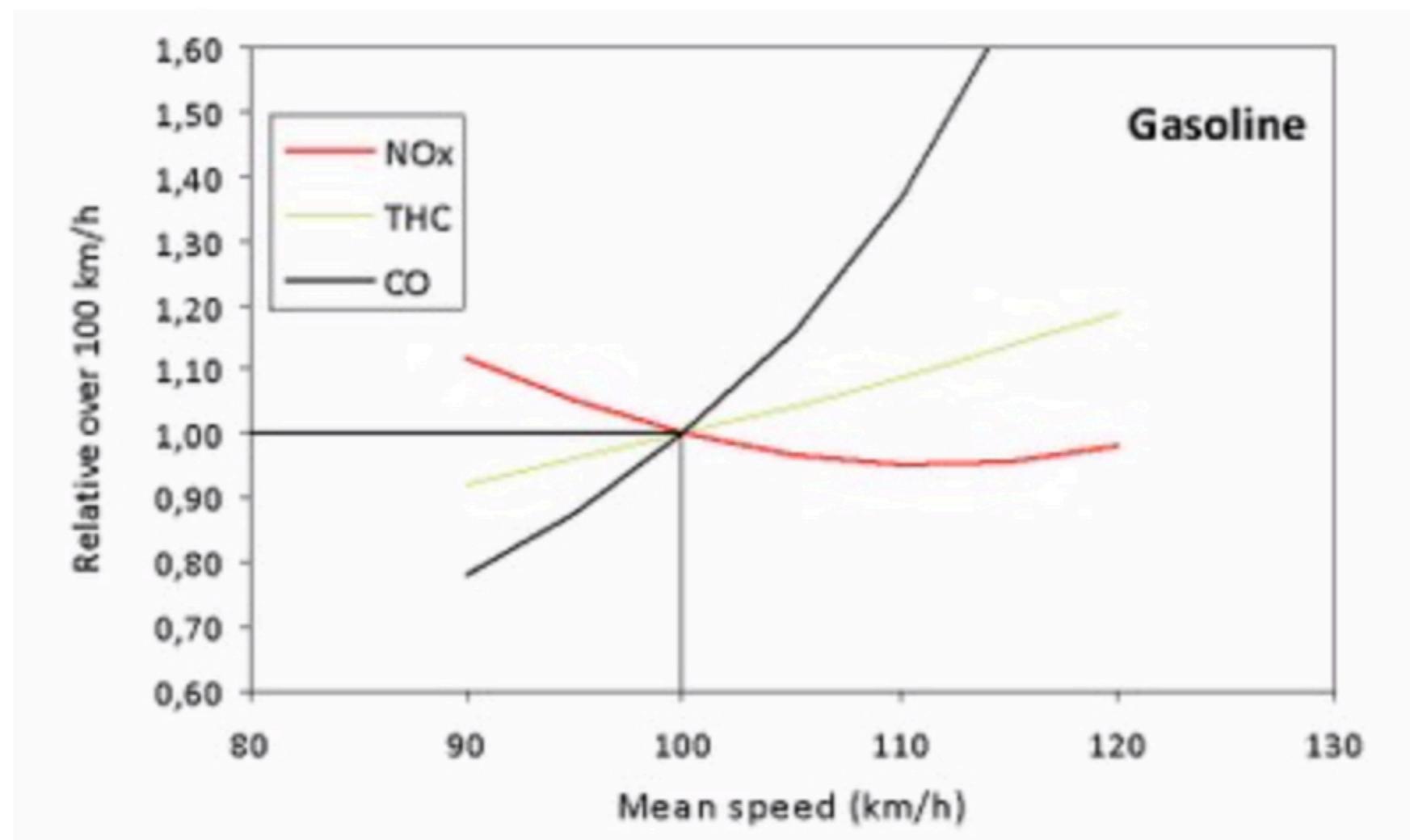
Intake fraction

Figure 3: Impact of travelling speed on various pollutants (Euro 4 diesel passenger cars, 1.4–2.0 litre engine capacity)



Note: emissions expressed relative to their values at 100 km/h, for which the value '1' is assigned.

Figure 4: Impact of travelling speed on various pollutants (Euro 4 gasoline passenger cars, 1.4–2.0 litre engine capacity)



Note: emissions expressed relative to their values at 100 km/h, for which the value '1' is assigned.

Source: EMISIA - ETC/ACM



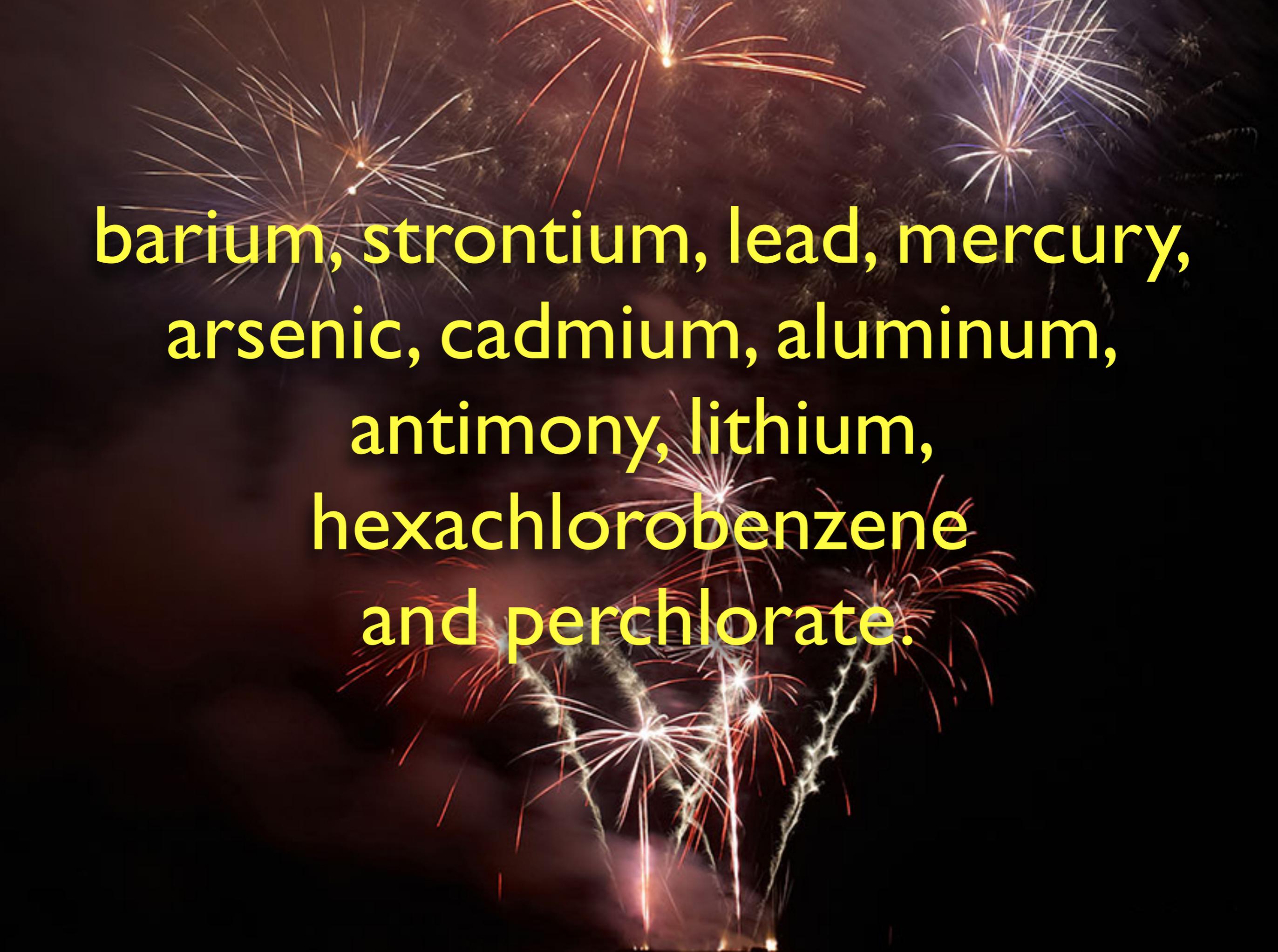
POOR AIR QUALITY
TRAVELWISE

AQB, not just UDOT, should have
a say in establishing freeway
speed limits

“decreasing car passenger speed limits in motorways could lead to substantial benefits. The modelling results also suggest that speed limitations of 80–90 km/h on motorways when entering cities and on city ring roads could significantly reduce both fuel consumption and pollutants emitted, in addition to delivering safety benefits.”

European Environmental Agency





barium, strontium, lead, mercury,
arsenic, cadmium, aluminum,
antimony, lithium,
hexachlorobenzene
and perchlorate.



Methane capture rule

A close-up photograph of the front right corner of a dark-colored car. The car's headlight, fog light, and bumper are visible. The background is heavily blurred, showing out-of-focus lights in red, green, and white, suggesting a busy urban or highway environment. The overall lighting is somewhat dim, with the car's surface reflecting some ambient light.

Vehicle fuel efficiency standards



Clean Power Plan
Mercury Air Toxics Rule

Air Toxics



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQA-040-19

MEMORANDUM

TO: Air Quality Board

FROM: Bryce C. Bird, Executive Secretary

DATE: January 14, 2019

SUBJECT: Air Toxics, Lead-Based Paint, and Asbestos (ATLAS) Section Compliance Activities – December 2018

Asbestos Demolition/Renovation NESHAP Inspections	13
Asbestos AHERA Inspections	13
Asbestos State Rules Only Inspections	1
Asbestos Notification Forms Accepted	103
Asbestos Telephone Calls	332
Asbestos Individuals Certifications Approved/Disapproved	118/0
Asbestos Company Certifications/Re-Certifications	3/28
Asbestos Alternate Work Practices Approved/Disapproved	6/0
Lead-Based Paint (LBP) Inspections	7
LBP Notification Forms Approved	0
LBP Telephone Calls	91
LBP Letters Prepared and Mailed	2
LBP Courses Reviewed/Approved	0
LBP Course Audits	0
LBP Individual Certifications Approved/Disapproved	18/0
LBP Firm Certifications	16

DAQA-040-19

Page 2

Notices of Violation Sent	0
Compliance Advisories Sent	7
Warning Letters Sent	2
Settlement Agreements Finalized	1
Penalties Agreed to:	
The Patch Boys	\$ 2,639.50

Compliance



State of Utah

GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Department of
Environmental Quality

Alan Matheson
Executive Director

DIVISION OF AIR QUALITY
Bryce C. Bird
Director

DAQC-0047-18

MEMORANDUM

TO: Air Quality Board
FROM: Bryce C. Bird, Executive Secretary
DATE: January 10, 2019
SUBJECT: Compliance Activities – December 2018

Annual Inspections Conducted:

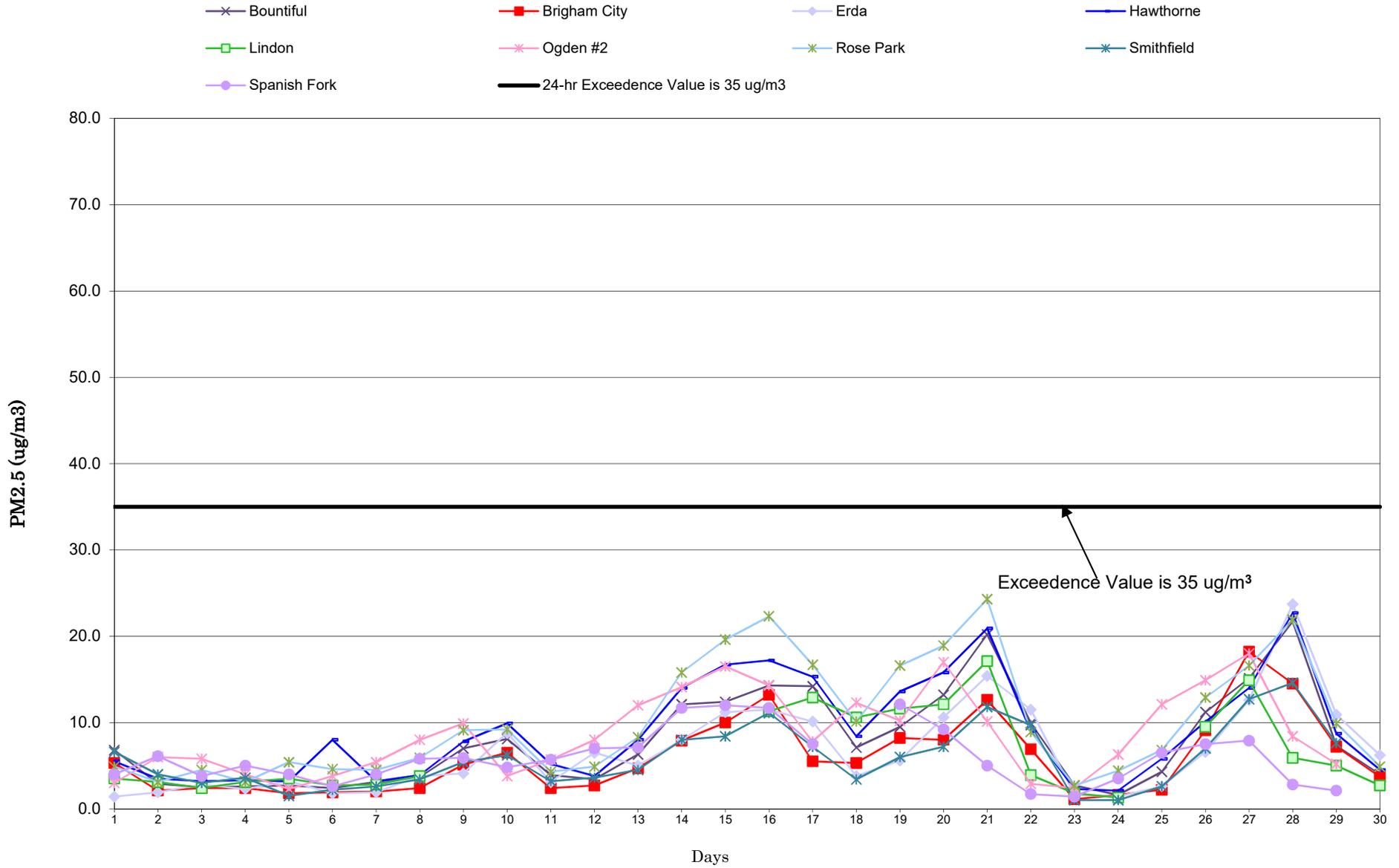
Major	5
Synthetic Minor	3
Minor	41
On-Site Stack Test Audits Conducted:	5
Stack Test Report Reviews:	39
On-Site CEM Audits Conducted:	0
Emission Reports Reviewed:	20
Temporary Relocation Requests Reviewed & Approved:	5
Fugitive Dust Control Plans Reviewed & Accepted:.....	103
Open Burn Permit Applications Completed	Closed Season
Soil Remediation Report Reviews:	1
¹ Miscellaneous Inspections Conducted:.....	10
Complaints Received:	18

Breakdown Reports Received:.....	1
Compliance Actions Resulting From a Breakdown.....	0
Warning Letters Issued:	0
Notices of Violation Issued:.....	1
Unresolved Notices of Violation:	
US Magnesium	08/27/2015
HJG Utah	01/27/2017
Western Water Solutions	05/02/2017
Geneva Rock Products.....	10/20/2017
Norbest.....	11/15/2017
Strang Excavating.....	01/17/2018
US Magnesium	03/02/2018
Compass Minerals.....	04/10/2018
Compass Minerals.....	04/30/2018
Gordon Creek Compressor Station	05/16/2018
Compass Minerals.....	05/22/2018
JRJ Services	06/21/2018
JRJ Services	09/07/2018
Compass Minerals.....	12/10/2018
Compliance Advisories Issued:.....	4
No Further Action Letters Issued.....	0
Settlement Agreements Reached:	1
Granite Construction.....	\$359.00

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

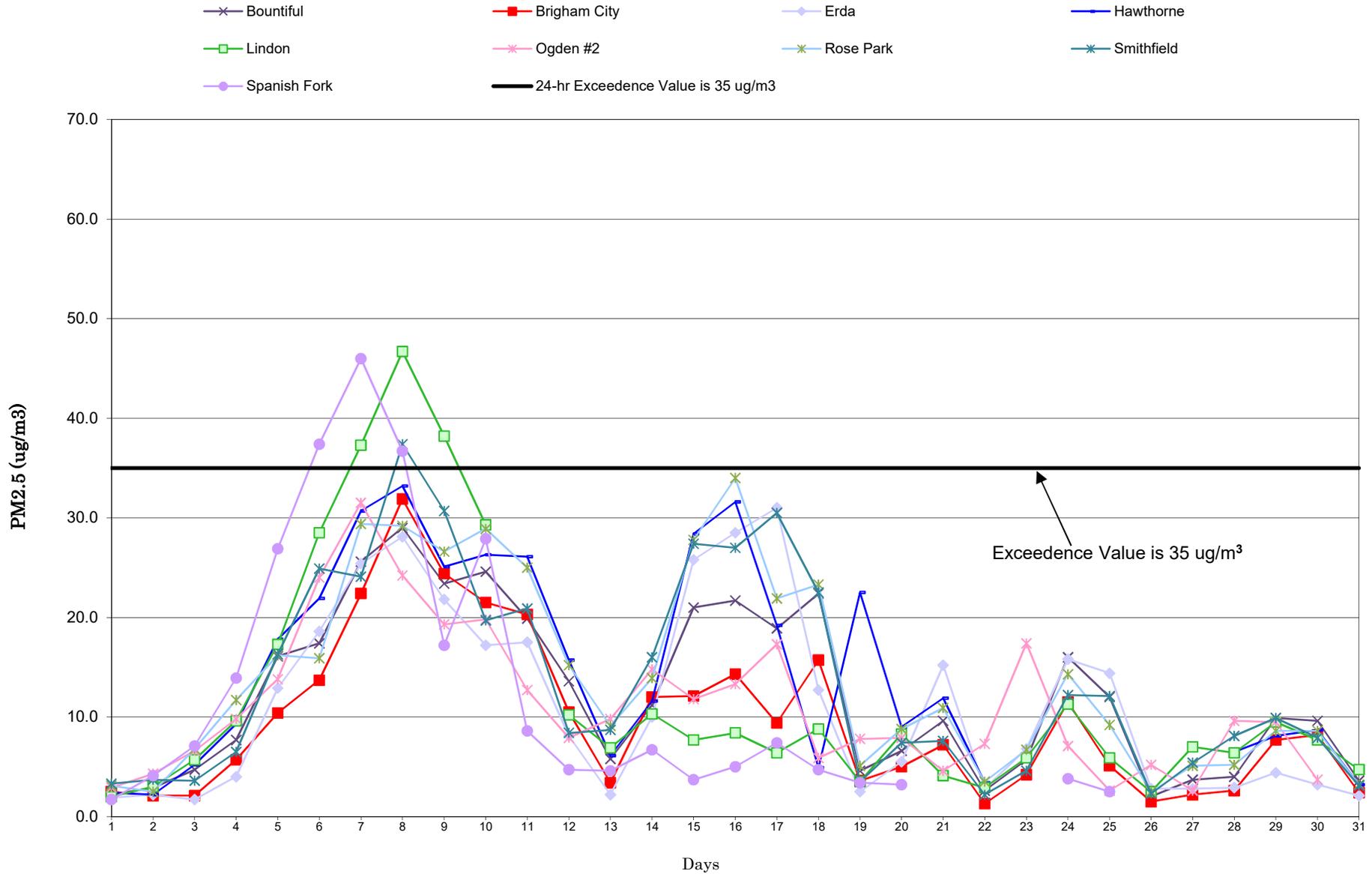
Air Monitoring

Utah 24-Hr PM2.5 Data November 2018



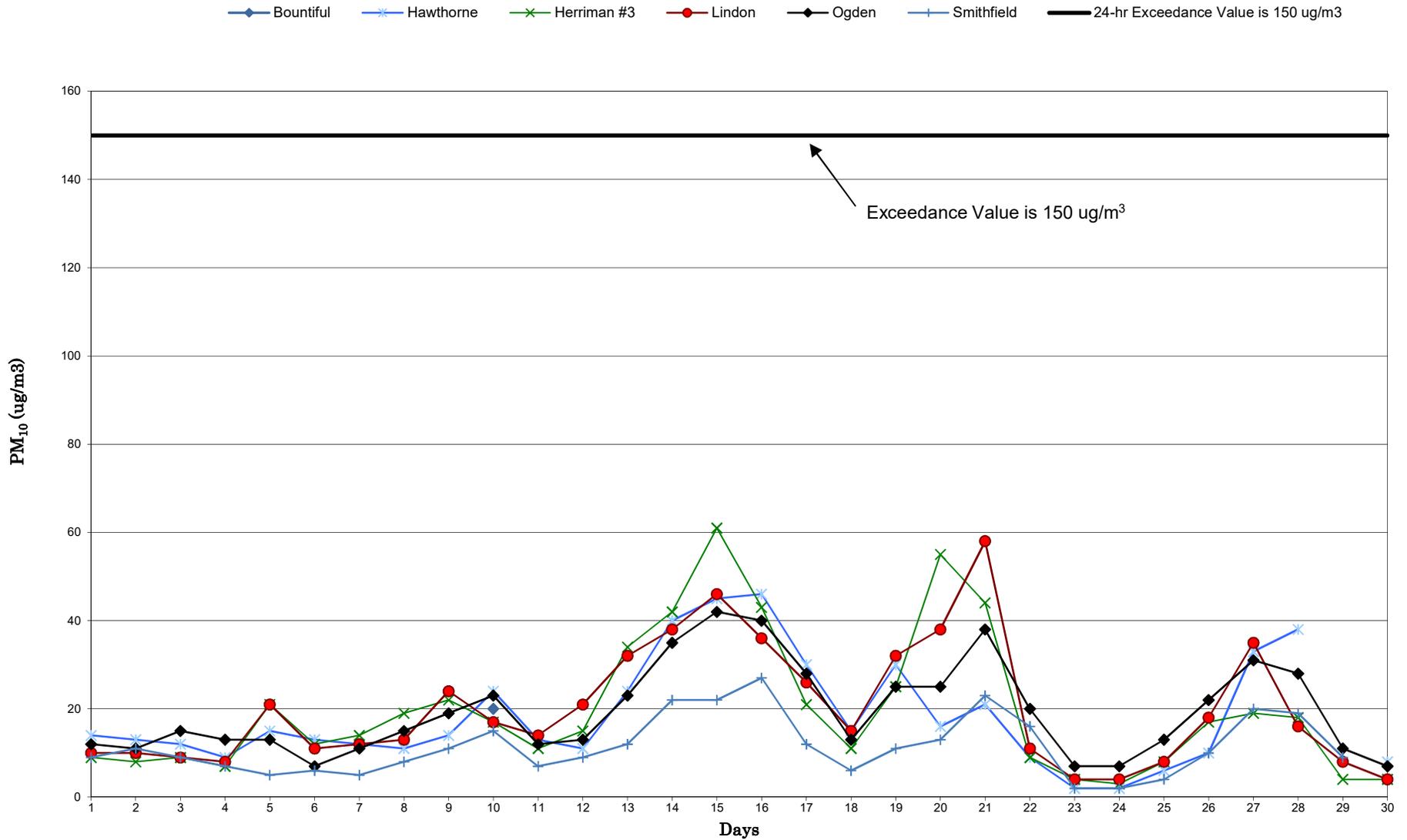
Exceedence Value is 35 ug/m³

Utah 24-Hr PM2.5 Data December 2018

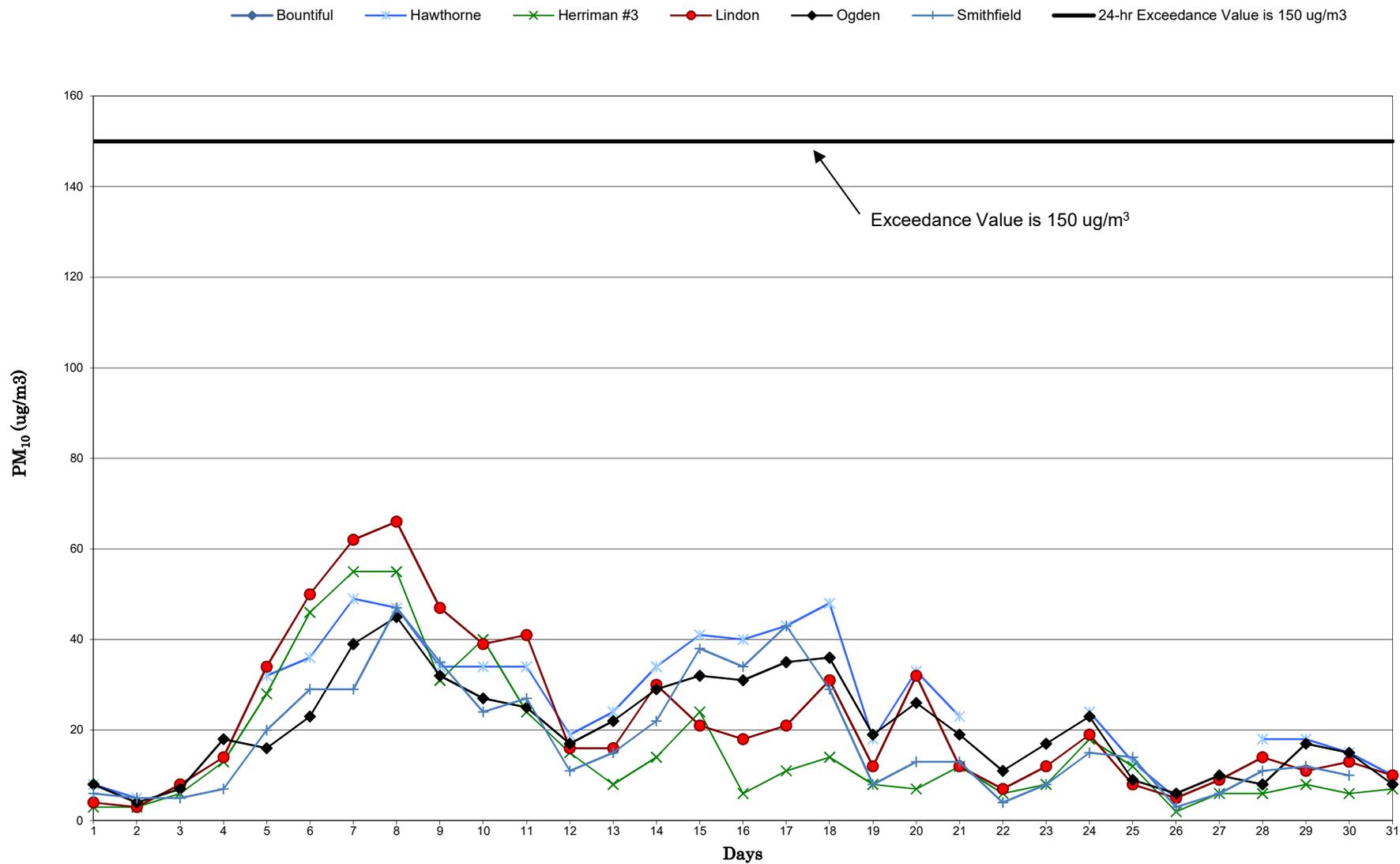


Exceedance Value is 35 $\mu\text{g}/\text{m}^3$

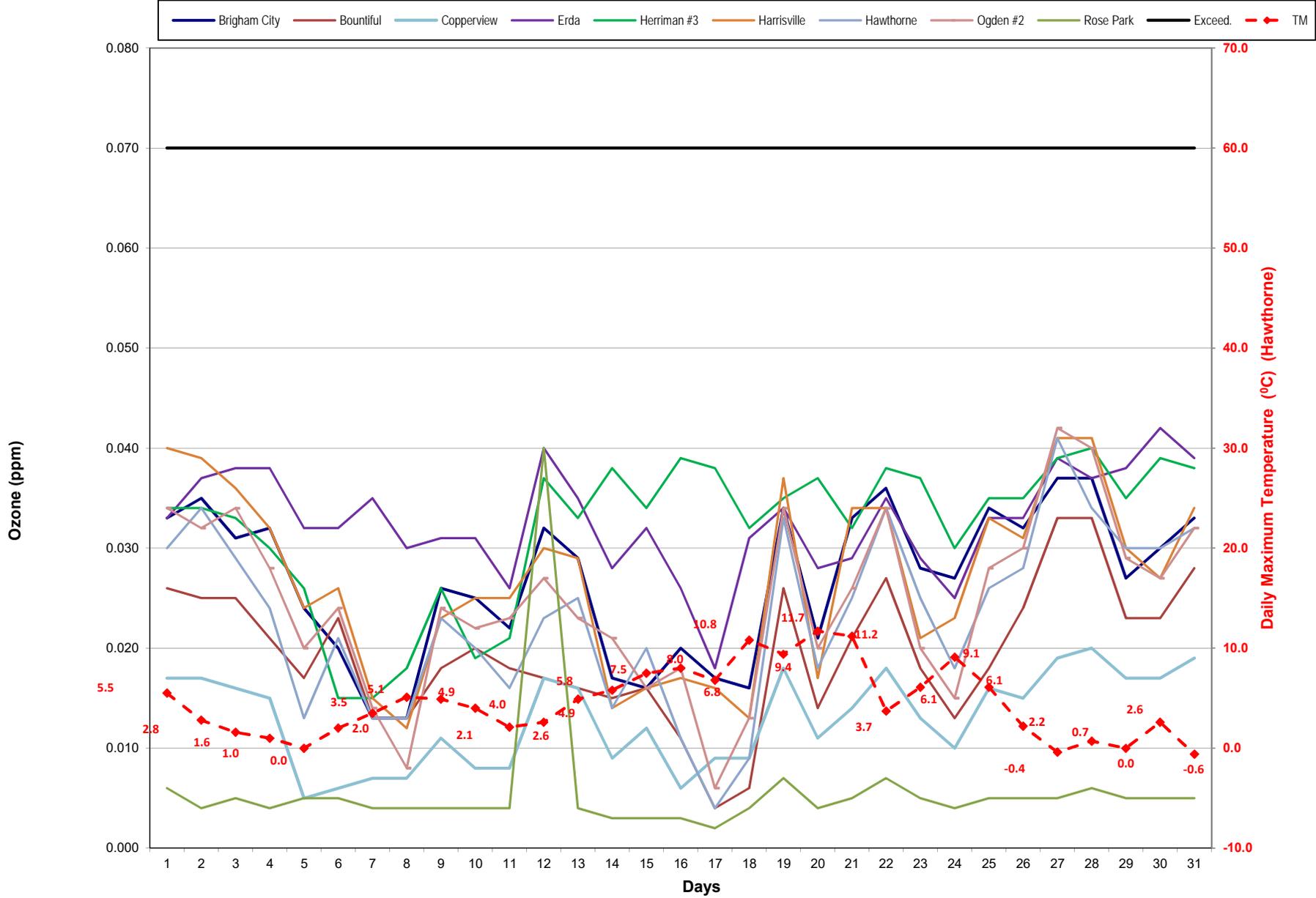
Utah 24-hr PM₁₀ Data November 2018



Utah 24-hr PM₁₀ Data December 2018

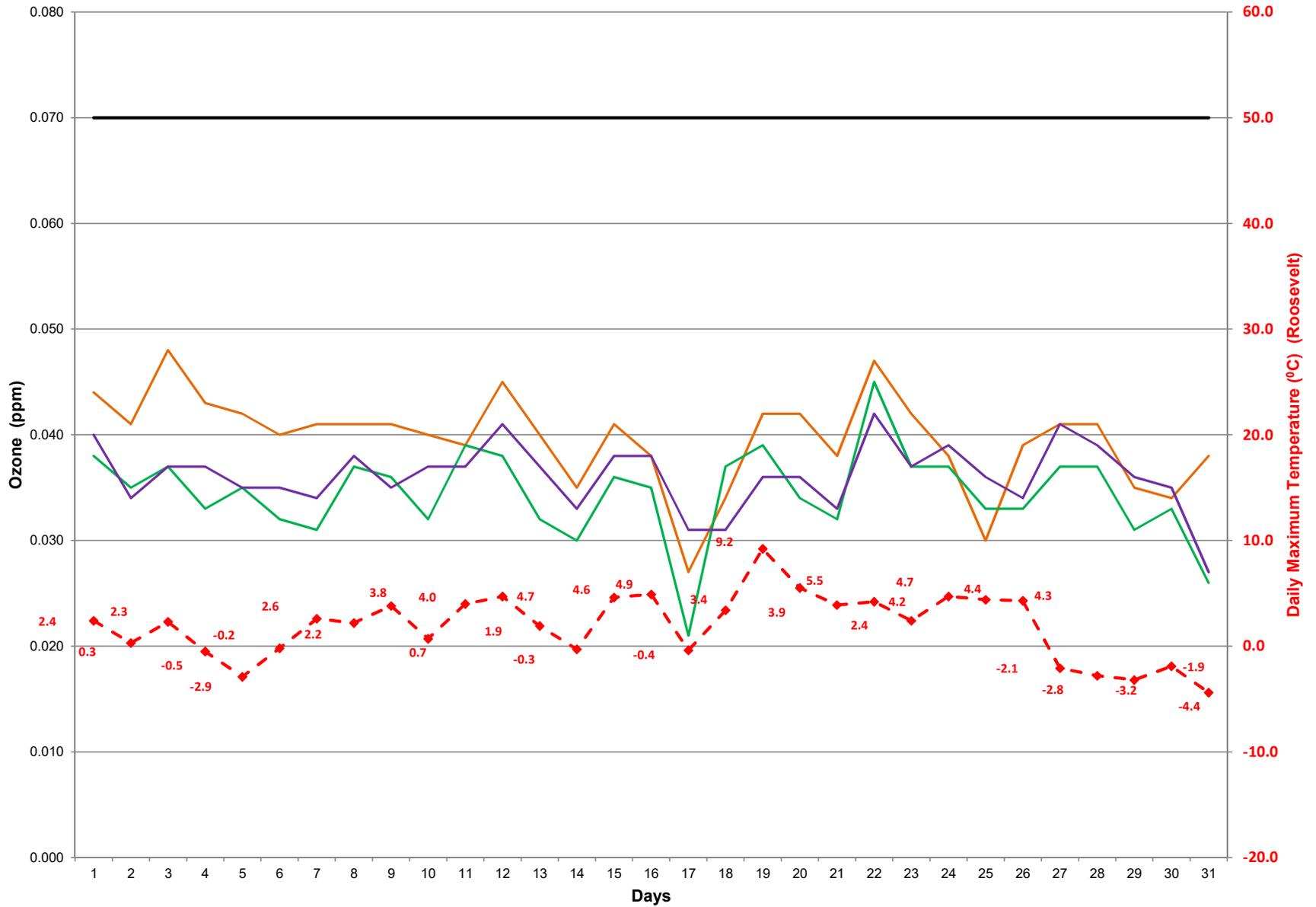


Highest 8-hr Ozone Concentration & Daily Maximum Temperature December 2018

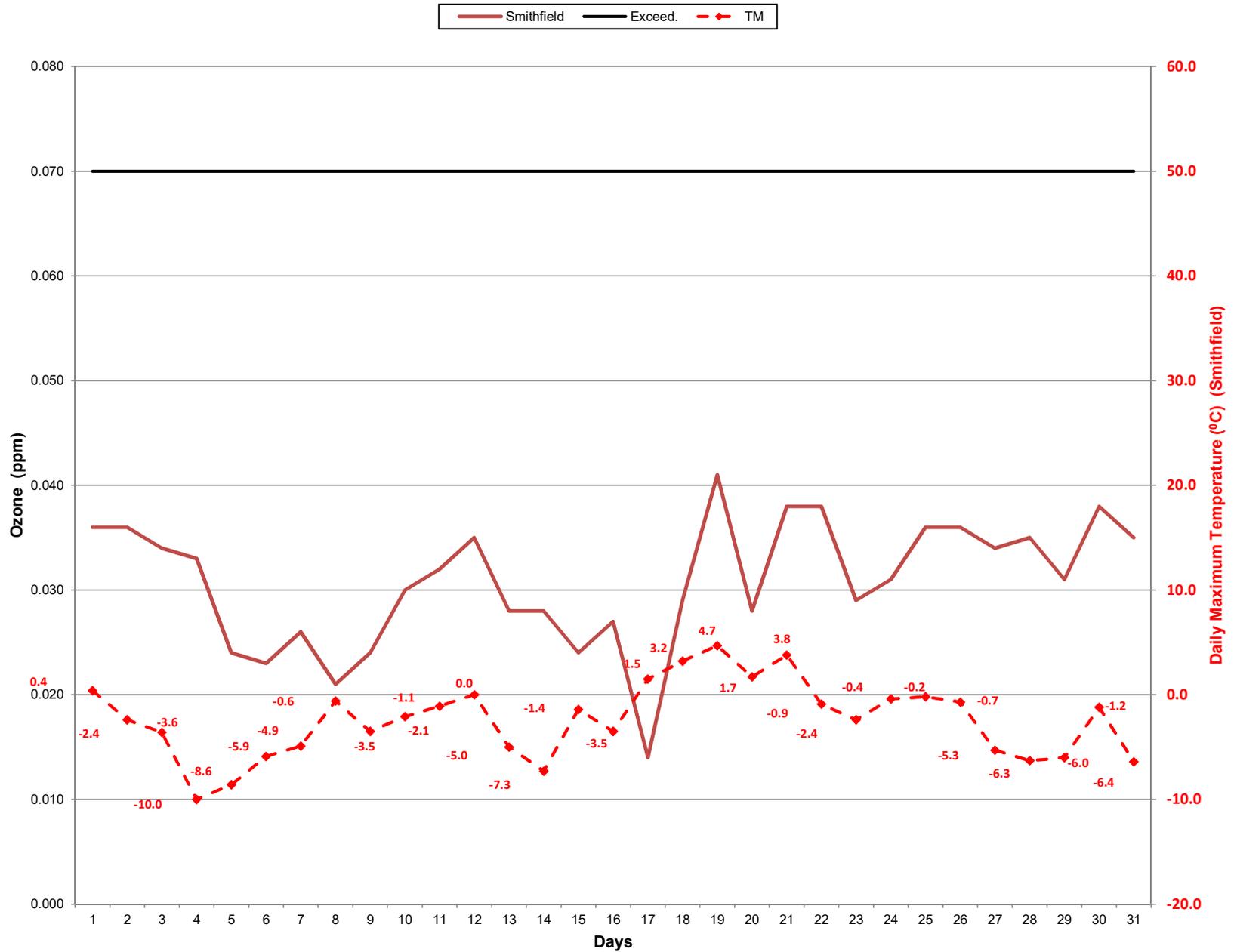


Highest 8-hr Ozone Concentration & Daily Maximum Temperature December 2018

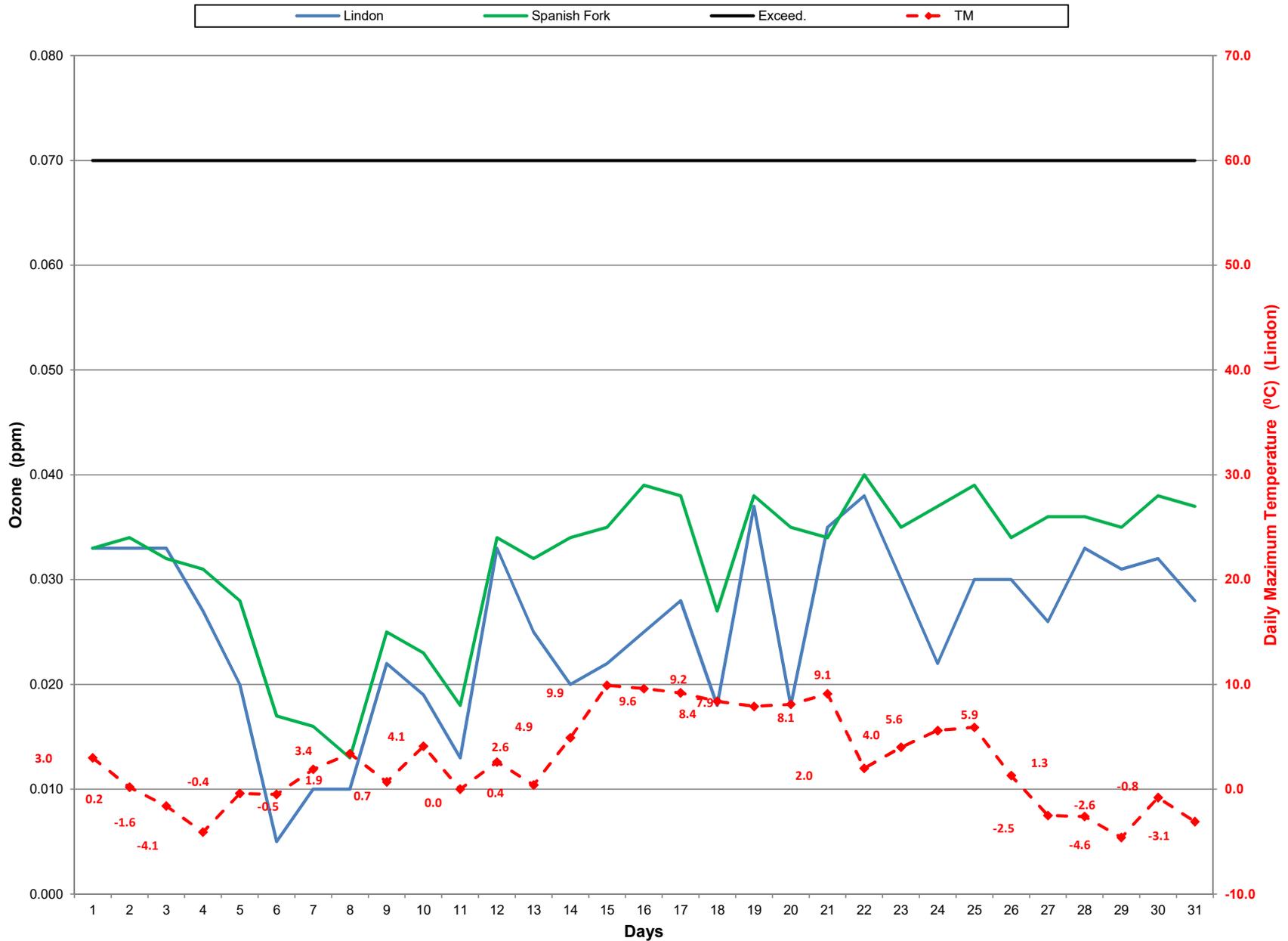
Price #2 Roosevelt Vernal #4 Exceed. TM



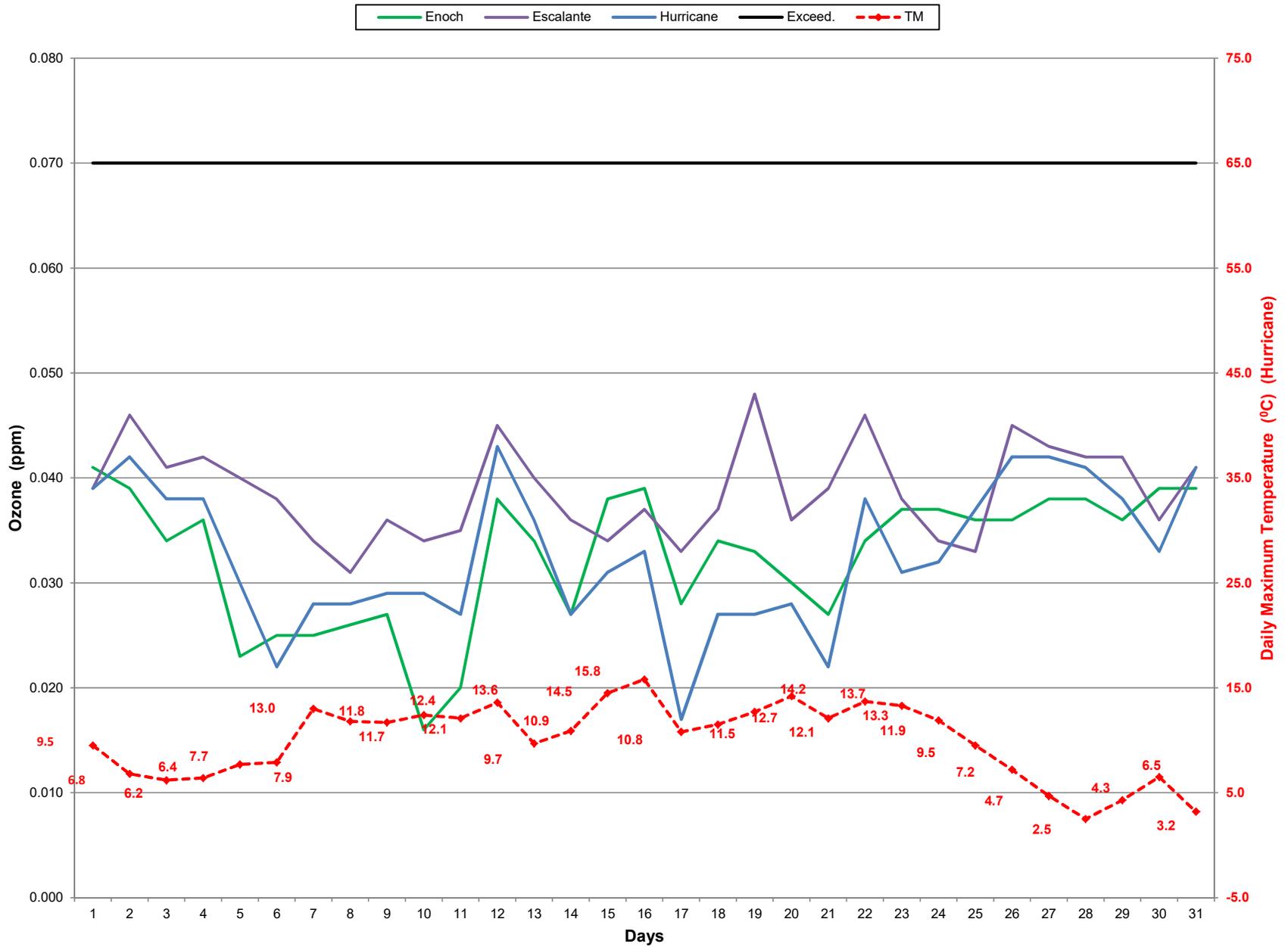
Highest 8-hr Ozone Concentration & Daily Maximum Temperature December 2018



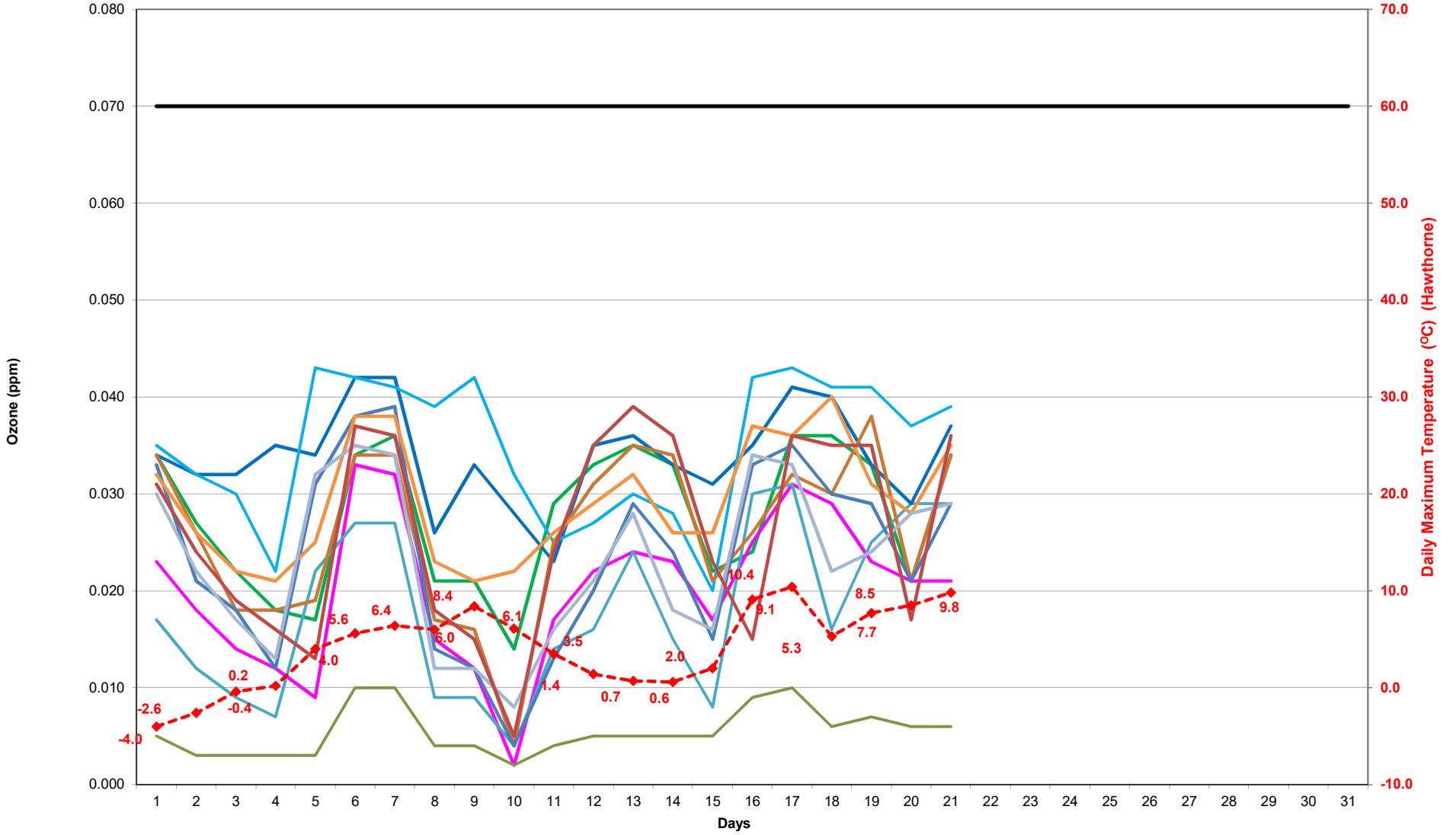
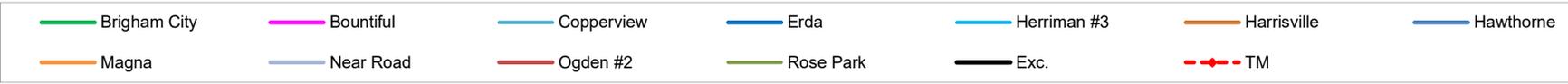
Highest 8-hr Ozone Concentration & Daily Maximum Temperature December 2018



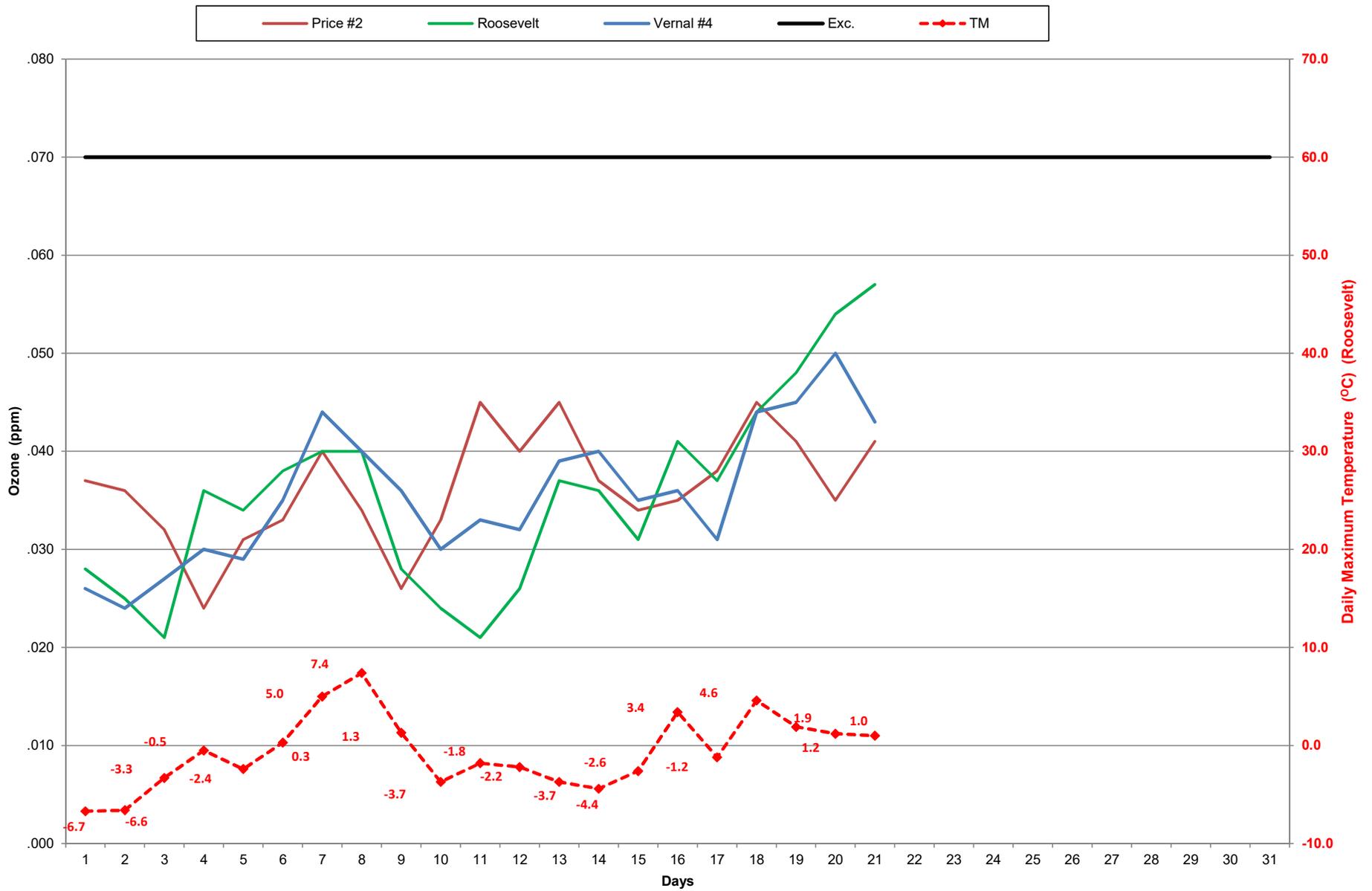
Highest 8-hr Ozone Concentration & Daily Maximum Temperature December 2018



Highest 8-hr Ozone Concentration & Daily Maximum Temperature January 2019

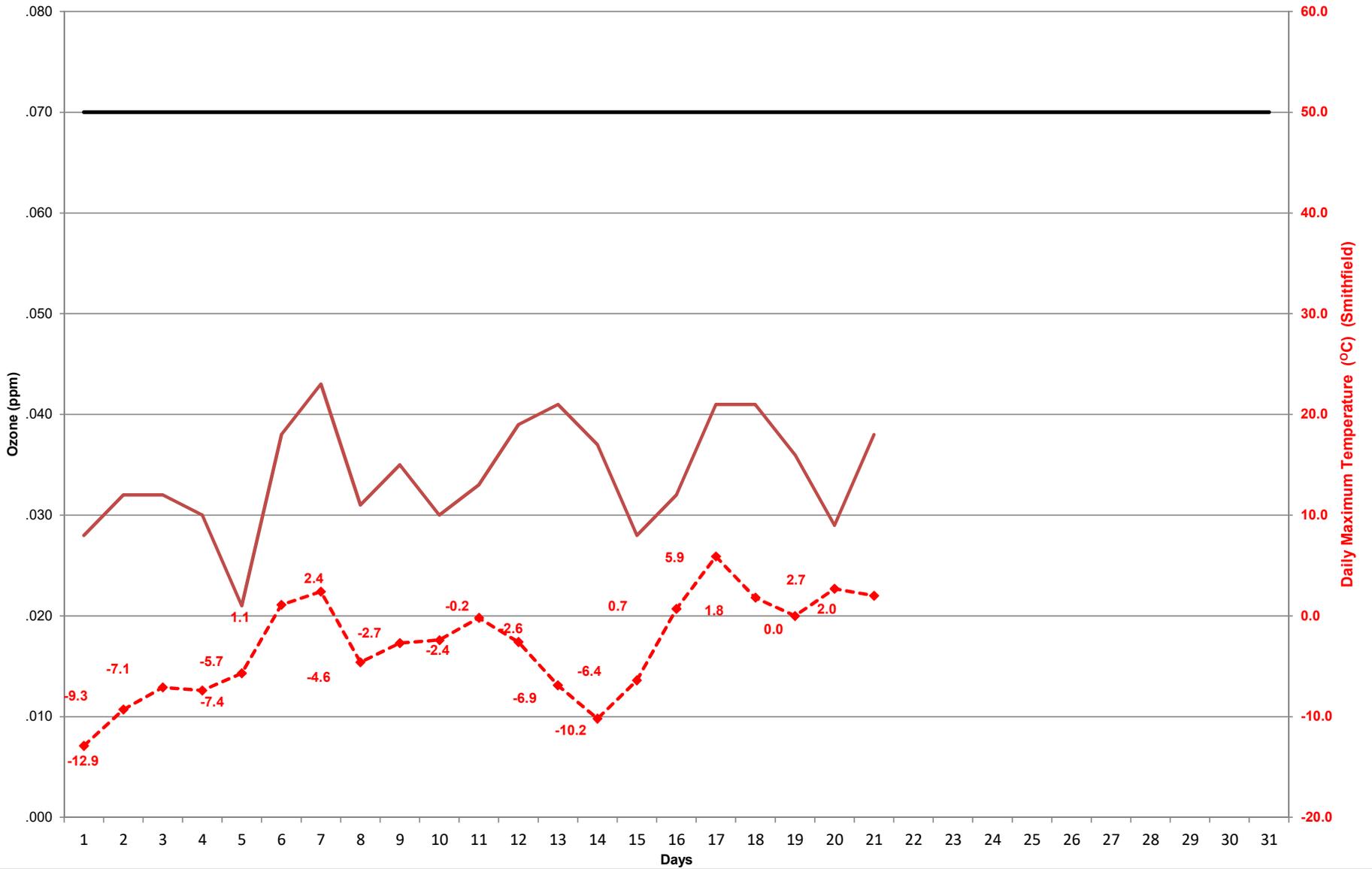


Highest 8-hr Ozone Concentration & Daily Maximum Temperature January 2019

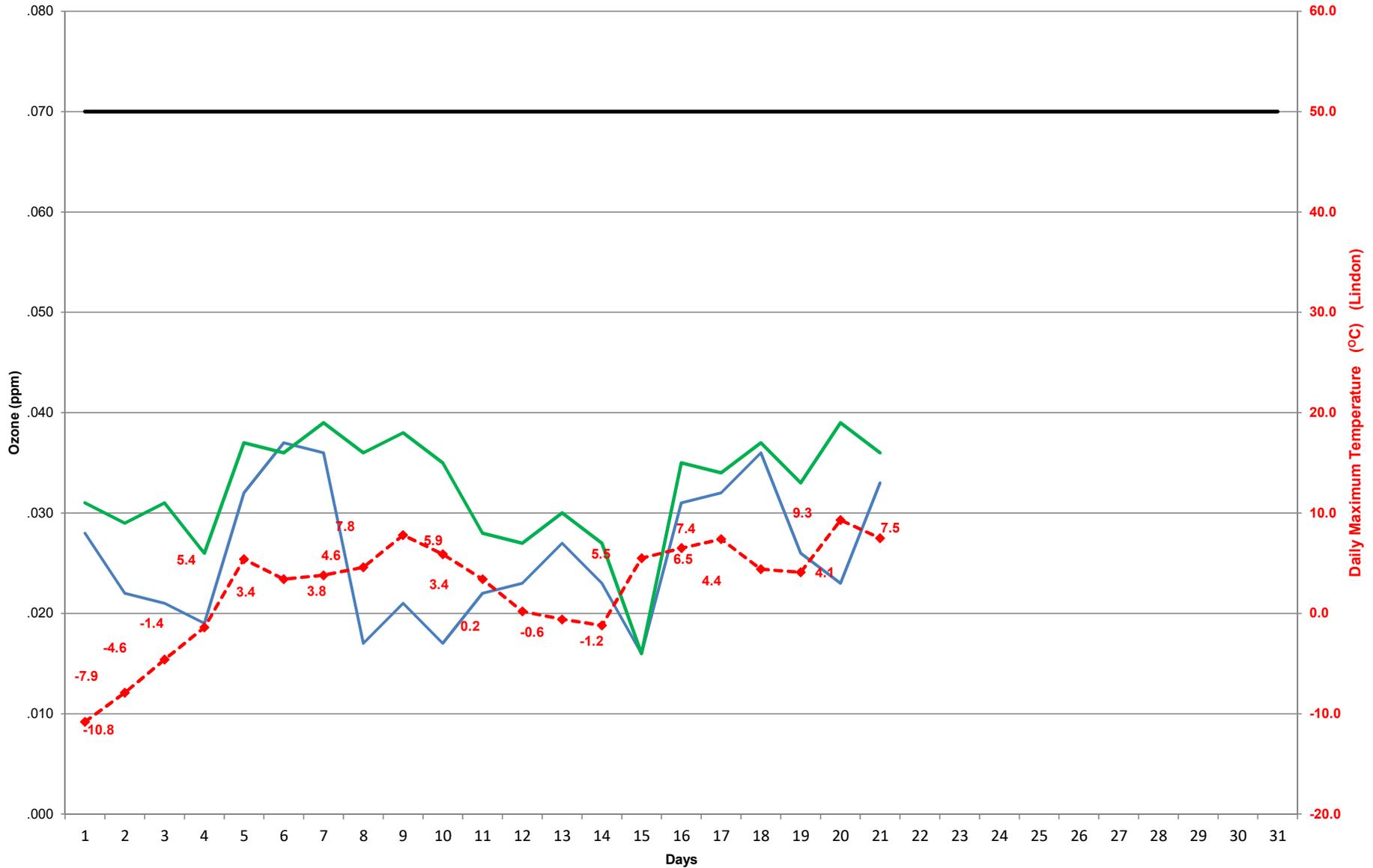
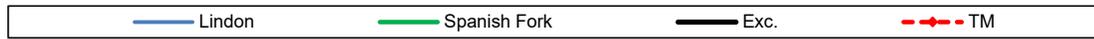


Highest 8-hr Ozone Concentration & Daily Maximum Temperature January 2019

Smithfield Exc. TM

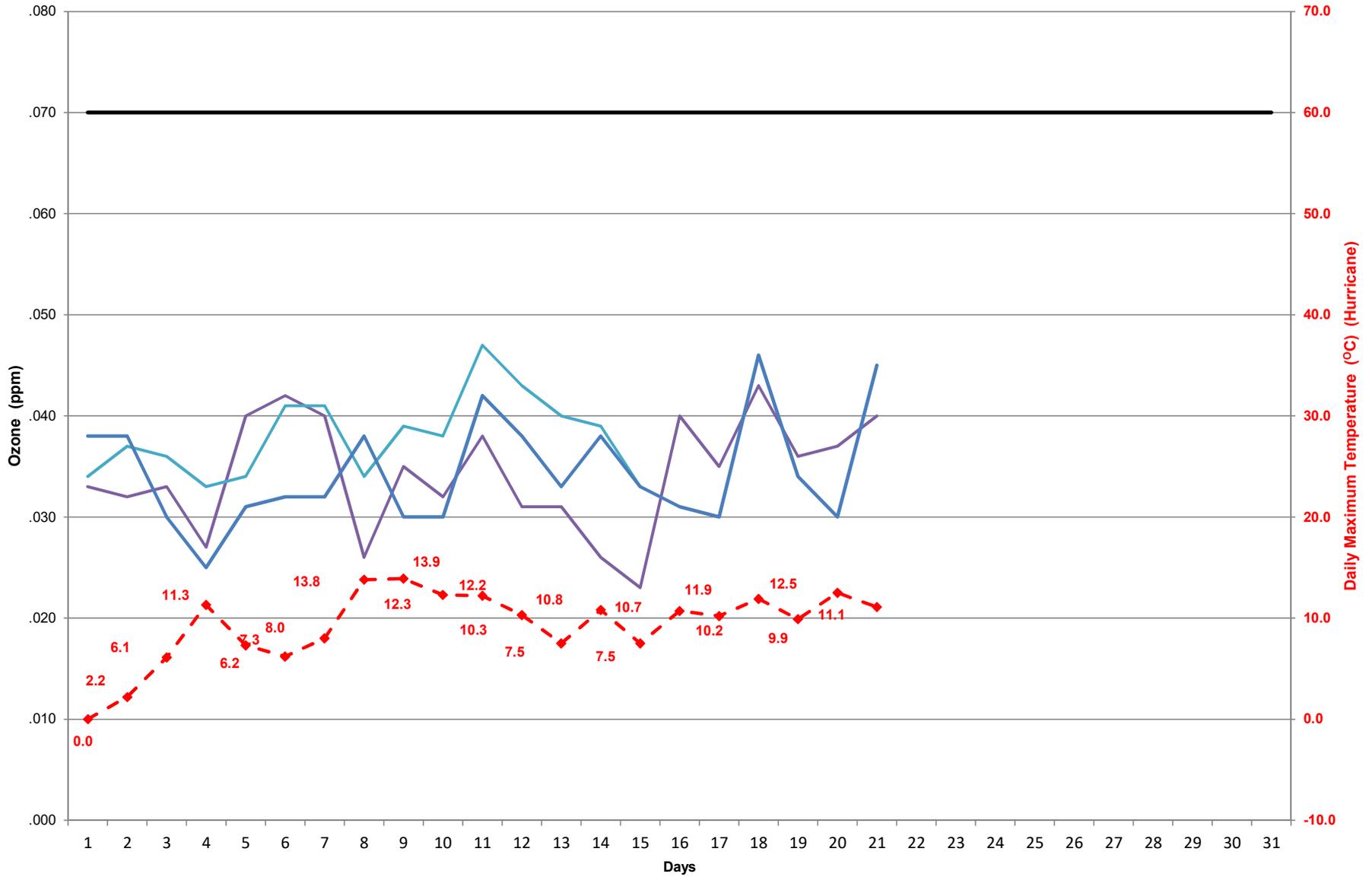


Highest 8-hr Ozone Concentration & Daily Maximum Temperature January 2019



Highest 8-hr Ozone Concentration & Daily Maximum Temperature January 2019

— Enoch — Escalante — Hurricane — Exc. — TM



PM2.5 98% 24-hr Concentration EPA Conquered EE Removed

Site_ID	Site	2013	2014	2015	2016	2017	2018	2019	2014-2015	2015-2017	2016-2018	2017-2019	Current Count	Current 98% Number	2019 Current 8th High
49-003-0003	Brigham City - BR	53.5	35.8	26.7	35.0	36.2	26.2	38.8	32.5	32.6	32.4	33.7	31	1	17.9
49-005-0004	Logan - L4	73.7	41.1	29.0					35.0						
49-005-0007	Smithfield-SM			28.9	34.0	36.0	27.9	39.2		32.9	32.6	34.3	31	1	23.2
49-011-0004	Bountiful - BV	45.6	45.9	29.2	24.7	35.2	25.7	31.3	33.2	29.7	28.5	30.7	26	1	9.7
49-013-0002	Roosevelt - RS			21.2	23.4	28.2	23.9	24.4		24.2	25.1	25.5	31	1	15.8
49-021-0005	Enoch-EN						13.7	9.7			13.7	11.7	31	1	6.1
49-035-1001	Magna - MG	40.3	46.3	22.9	30.7	30.1			33.3	27.9					
49-035-1002	Magna - MA							37.2				37.2	31	1	18.4
49-035-2005	Copperview - CV						31.6	42.8				37.2	31	1	20.5
49-035-3006	Hawthorne - HW	58.2	46.2	28.8	38.4	35.7	26.2	39.9	37.8	34.3	33.4	33.9	31	1	17.7
49-035-3010	Rose Park - RP	52.1	48.7	33.3	43.2	35.8	29.2	42.9	41.7	37.4	36.0	35.9	31	1	20.5
49-035-3013	Herriman - H3				24.9	28.2	29.0	25.3			27.3	27.5	30	1	11.3
49-035-4002	Near Road - NR							44.7				44.7	31	1	20.2
49-045-0004	Erda - ED				25.1	20.9	30.6	30.5			25.5	27.3	31	1	11.4
49-047-1004	Vernal - V4			18.9	24.9	20.6	19.1	16.3		21.4	21.5	18.6	31	1	12.5
49-049-0002	North Provo - NP	83.0	25.9	25.0	36.6	21.9			29.1	27.8					
49-049-4001	Lindon - LN	91.0	29.7	27.3	36.3	28.9	28.4	25.9	31.1	30.8	31.2	27.7	31	1	18.5
49-049-5010	Spanish Fork - SF	84.6	28.7	28.1	29.2	27.6	49.6	24.8	28.6	28.3	35.4	34.0	19	1	8.2
49-053-0007	Hurricane - HC		9.2	10.8	14.0	13.5	17.9	7.8		12.7	15.1	13.0	31	1	3.8
49-057-0002	Ogden - O2	42.5	30.6	32.3	39.0	27.1	24.6	36.1	33.9	32.8	30.2	29.2	31	1	17.0
Standard (35)		35 µg/m ³													

2019 Data not quality assured. As of 02/04/2018.