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Table of Contents

Jurisdiction..... 1

Issues for Review..... 1

 I. First Issue 1

 A: Standard of Review 1

 B: Preservation 3

 II. Second Issue 5

 A: Standard of Review 5

 B: Preservation 5

Determinative Law 6

Statement of the Case 6

 I. Nature of the Case 6

 II. Proceedings Below 10

 III. Statement of Facts 12

 A: FCCU Modifications Trigger BACT. 13

 B: BACT Results in Lowest Achievable Emission Limitation. 14

 C: Chronology and Substance of the Analysis Shows BACT for the FCCU is Inadequate. 15

 1. BACT Before Close of Comment Period. 16

 2. Utah Physicians’ BACT Comments. 17

 3. BACT After Close of Comment Period. 17

 4. The 2006 FCCU Emission Limitations Were Not Derived from BACT Analysis. 20

5. The 2012 FCCU Emission Limitations Were <u>Not</u> Derived from BACT Analysis.....	21
6. The Director’s Perfunctory Rejection of Evidence of Lower Achievable FCCU Emission Limitations.....	22
7. The Director’s BACT “Analysis” of the SRU, DDU and VRU.....	25
Summary of the Argument	27
Argument.....	29
I. The Director’s Application of BACT to the FCCU is Neither Legally Sufficient nor Supported by the Record.	29
A: The Only BACT “Analysis” Attributable to the Director is Legally Insufficient and Consists of Mere Assertion that Lacks a Basis in the Record.	29
1. The Record Does Not Support the Director’s BACT Assertions.	30
2. The Director’s Analysis Failed to Result in an Emission Limitation Reflective of BACT.	31
3. The BACT Emission Limitations Fail to Protect Short-Term NAAQS	34
4. The Director’s BACT Analysis is Inadequate Because it Fails to Result in an Emission Limitation on PM _{2.5}	36
5. The Subpart Ja Emission Limitations for an FCCU Are the Minimum BACT Emission Limitations that Must Apply to the Tesoro Refinery.....	37
6. The Big West, MARAMA and Holly Consent Decree Evidence Further Establish that the Director’s BACT Analysis is Unreasonable.	39
7. The Director May Not Rationalize his BACT Analysis Based on Factors He Did Not Consider or on Evidence He Did Not Cite.	42
B: Tesoro’s Pre-Comment Period BACT “Analysis” is Legally Insufficient and Consists of Mere Assertions that Lacks a Basis in the Record	44
C: Tesoro’s Post-Comment Period Justification Undermines the Director’s Authorization of Existing Limits and Controls as BACT	46

II. The Director’s Application of BACT to the SRU, DDU and VRU is Neither Legally Sufficient Nor Supported by the Record	49
A: The SRU	49
B: The DDU and ARU	51
Conclusion	53
Certificate of Service	55
Certificate of Compliance.....	55
Exhibit List	56

TABLE OF AUTHORITIES

<u>Cases</u>	<u>Page</u>
<i>Adoption of Baby B.</i> , 2012 UT 35, ¶ 42, 308 P.3d 382	3
<i>American Petroleum Inst. v. EPA</i> , 540 F.2d 1023, 1029 (10th Cir. 1976).....	43
<i>Kennon v. Air Quality Board</i> , 2009 UT 77, ¶¶ 27, 28, 70 P.3d 417.....	31, 44
<i>Motor Vehicle Mfrs. Ass’n v. State Farm</i> , 463 U.S. 29, 50 (1983).....	43
<i>Murray v. Utah Labor Comm’n</i> , 2013 UT 38, ¶ 19, 308 P.3d 461.....	1
<i>Olenhouse v. Commodity Credit Corp.</i> , 42 F.3d 1560, 1575, 1580 (10th Cir.1994)..	3, 43
<i>Provo City v. Utah Labor Com’n</i> , 2015 UT ¶¶ 9, 16, 17, ___P.3d__	1, 2
<i>Utah Chapter of the Sierra Club v. Air Quality Board</i> , 2009 UT 76, ¶¶ 4, 13, 14, 45, 47, 48, 226 P.3d 719	2, 13, 14, 15, 17, 19, 21, 22, 23, 30, 31, 32, 33, 34, 39, 41, 42, 45, 47, 49, 51
 <u>EAB Cases</u>	
<i>Indeck-Elwood</i> , 13 E.A.D. 126, 175 (EAB 2006).....	32, 41, 42, 43, 46, 52, 53
<i>Miss. Lime Co.</i> , slip op. 42-45, 15 E.A.D. __ (EAB 2011).....	34, 40
<i>Newmont Nev. Energy Inv.</i> , 12 E.A.D. 429, 443 (EAB 2005).....	40
<i>Pio Pico Energy Center</i> , slip op. 93, 95, 96.....	40, 41, 43, 44
<i>Steel Dynamics, Inc.</i> , 9 E.A.D. 165, 224-25 (EAB 2000).....	40, 43
 <u>Utah Code Annotated</u>	
Utah Code Ann. § 19-1-301.5.....	11, 33
Utah Code Ann. § 19-1-301.5(6)(c)	4
Utah Code Ann. § 19-1-301.5(8)(a).....	2, 11

Utah Code Ann. § 19-1-301.5(11).....	12
Utah Code Ann. § 19-1-301.5(13)(b)	3
Utah Code Ann. § 19-1-301.5(14).....	3
Utah Code Ann. § 19-1-301.5(14)(c)	1
Utah Code Ann. § 63G-4-403(4)	1
Utah Code Ann. § 78A-4-103(2)(a)(i)(B).....	1

Utah Administrative Code

Utah Admin. Code r.307-101-2.....	20, 21
Utah Admin. Code r.307-401-2(1)	6, 13, 14, 17, 21, 22, 30, 31, 32, 33, 37, 45, 48, 49, 52, 53
Utah Admin. Code r.307-401-8	1, 5, 6, 13, 30, 51
Utah Admin. Code r.307-401-8(1)(a)	14, 17
Utah Admin. Code r.307-401-8(1)(b)(vii).....	35
Utah Admin. Code r.307-401-8(5)	14, 17, 35
Utah Admin. Code r.307-401-12	27, 50, 51
Utah Admin. Code r.307-401-12(1)(a)	50, 51

United States Code

42 U.S.C. § 7410(a)(2)(C),	12
42 U.S.C. § 7475	12
42 U.S.C. § 7503	12

Code of Federal Regulations

40 C.F.R. § 51.160.....12

40 C.F.R. § 51.21(b)(12)52, 53

40 C.F.R. § 52.2320(c)(28)(i)(B)13

40 C.F.R. part 6038

40 C.F.R. part 60, Subpart Ja37, 38, 39

40 C.F.R. part 6138

40 C.F.R. § 60.100a(b)(4)20, 48

Federal Register

75 Fed. Reg. 6474 (February 2, 2010)34

75 Fed. Reg. 35520 (June 22, 2010)34

73 Fed. Reg. 35838, 35839, 35844, 35846, 35847 (June 24, 2008)38

Other

EPA New Source Review Workshop Manual14, 15, 30, 32, 35, 40, 48

EPA 1-Hour SO₂ NAAQS Guidance Memo35

Utah House of Representatives Floor Debate, 2012 General Session, Day 10, Senate Bill 11, 00:40:00-00:47:00.....33

Utah Senate Floor Debate, 2012 General Session, Day 3, Senate Bill 11, 01:08:41-01:09:45.....33

JURISDICTION

Jurisdiction is provided by Utah Code Ann. § 78A-4-103(2)(a)(i)(B).

ISSUES FOR REVIEW

I. First Issue

Whether by failing to derive a legally defensible emission limitation for the Tesoro refinery's fluidized catalytic cracking unit (FCCU) that is reflective of best available control technology (BACT), protective of National Ambient Air Quality Standards (NAAQS), and supported by the record, the Director violated his Utah Admin. Code r.307-401-8 permitting obligations.

A. Standard of Review

In reviewing the legal adequacy of the Director's compliance with his Utah Admin. Code r.307-401-8 permitting responsibilities, this Court shall adhere to Utah Code Ann. § 63G-4-403(4), recognizing the agency has "substantial discretion to interpret its governing statutes and rules" and upholding "factual, technical, and scientific agency determinations that are supported by substantial evidence viewed in light of the record as a whole." Utah Code Ann. § 19-1-301.5(14)(c); *Murray v. Utah Labor Comm'n*, 2013 UT 38, ¶ 19, 308 P.3d 461 (a challenge to the agency's finding of fact is reviewed for substantial evidence).

However, the assessment of the Director's compliance with r.307-401-8 presents a mixed question of law and fact reviewed to determine if the "agency has erroneously... applied the law." *Provo City v. Utah Labor Com'n*, 2015 UT ¶ 9, ___P.3d___; *id.* ¶ 10 ("[T]he characteristic that distinguishes a mixed question from a question of fact is the

existence of an articulable legal issue.” (internal punctuation omitted)); *id.* ¶ 16 (“A court cannot resolve” this issue “without applying a legal definition...to the facts of the case.”). As a result, the appellate court will “review the administrative body’s findings of fact under the substantial evidence standard,” while it will “review the law applied to these facts for correctness.” *Provo City*, ¶ 17; *see also Utah Chapter of the Sierra Club v. Air Quality Board*, 2009 UT 76, ¶ 14, 226 P.3d 719 (“[M]ixed findings of fact and law, and the agency’s interpretation of the operative provisions of statutory law it is empowered to administer are reviewed under an intermediate standard that considers whether the agency’s determination was rational”); *id.* ¶ 13 (“When reviewing an agency’s interpretation of law, we review for correctness[.]” (internal punctuation omitted)).

Despite any discretion given to the Director’s decision, his BACT analysis must be supported by substantial evidence, *Sierra Club*, ¶ 13, must further the goal of ensuring that the best control technology is adopted, *id.* ¶ 45 (“[W]hile the Board has discretion to interpret its own regulations...it must do so with an eye to...ensuring that the best available control technology is adopted.”), and is not reasonable where there is evidence that a lower overall emission limitation was achievable. *Id.* ¶ 48 (holding it was “unreasonable for the agency to adopt the 0.1 twenty-four hour emission limitation when there was evidence that a lower overall emission limitation was achievable[.]”).

Moreover, the Executive Director’s November 17, 2014 Final Order is owed no deference. The Executive Director necessarily limited her review to the same administrative record that is before this Court, Utah Code Ann. § 19-1-301.5(8)(a), to which she applied the same standard of review that this Court will apply to agency

factual determinations. Utah Code Ann. §§ 19-1-301.5(14); 19-1-301.5(13)(b). Because this is an “on the record” case, there was no trial below, no witness testimony and no observation of facts “that cannot be adequately reflected in the record available to appellate courts[.]” *See Adoption of Baby B.*, 2012 UT 35, ¶ 42, 308 P.3d 382.

Therefore, this Court is positioned to undertake an independent evaluation of the Director’s permitting decision based on the administrative record and the standard of review articulated above. *See Olenhouse v. Commodity Credit Corp.*, 42 F.3d 1560, 1580 (10th Cir.1994) (“In reviewing the agency’s action,” on the record, “we must render an independent decision using the same standard of review applicable to the District Court. Once appealed, the District Court’s decision is accorded no particular deference.”). This is particularly true because the Director’s decision must be reviewed on the basis he articulated at the time he made his decision and any post-hoc rationalizations for the permitting decision are unpersuasive. *Id.* at 1575.

B. Preservation

To the extent that the issue was ascertainable, Utah Physicians preserved the first issue by raising it in its comments, IR001112, IR001113, IR001119-1122, and in its Request for Agency Action. IR002893-94, IR002896, IR002902-2907.

As **part** of its claim that the Director’s application of BACT to the FCCU is legally indefensible and that his BACT determinations are not supported by the record, Utah Physicians asserts that the Director erred because he failed: 1) to impose emission limitations on the FCCU protective of the one-hour NAAQS; 2) to consider current New Source Performance Standards (NSPS) in establishing BACT for the FCCU; and, 3) to

limit PM_{2.5} emissions from the FCCU. Utah Physicians preserved these issues adequately to the extent that they were ascertainable during the comment period. *See* Utah Code § 19-1-301.5(6)(c).

Initially, Utah Physicians objected repeatedly to the Director's failure to derive emission limitations that reflect BACT. IR001119-1120, IR002902-2907. Moreover, prior to the close of the comment period, the Director's six-line BACT "analysis" for the FCCU provided very little on which Utah Physicians could comment. For example, in those six lines, the Director had not articulated the reasons for his BACT conclusions or documented his decisionmaking in any way. Most importantly, the BACT analysis the Director presented to the public for comment did not result in or specify emission limitations of any sort, much less emission limitations particular to the FCCU. As there were no emissions limits on which Utah Physicians could comment, the organization was not in a position to raise issues as to the specific form a hypothetical emission limitations should take or factors the Director should consider when deriving the non-existent emission limits.

Finally, as Utah Physicians explained in its Request for Agency Action, the Director failed to attach to his Response to Comments several key BACT documents, submitted by Tesoro after the close of the comment period. Despite repeated requests, the Director did not provide these documents to Utah Physicians until 20 days into the 30-day window during which the organization could file its Request for Agency Action. ADJ002897. As a result, for the purposes of both its comments and Request for Agency Action, Utah Physicians could not ascertain specific issues related to the Director's

application of BACT to the FCCU or concerning the BACT documents that were not released to the organization in a timely fashion.

II. Second Issue

Whether by failing to derive a legally defensible emission limitations for the Tesoro refinery's sulfur recovery unit/tail gas incinerator (SRU), distillate desulfurization unit (DDU) and vapor recovery unit (VRU) that were reflective of best available control technology (BACT), protective of NAAQS, and supported by the record, the Director violated his Utah Admin. Code r.307-401-8 permitting obligations.

A. Standard of Review

The standard of review applicable to the second issue is the same as that applied to the first issue.

B. Preservation

To the extent that the issue was ascertainable, Utah Physicians preserved the second issue by raising it in its comments, IR001112, IR001119, IR001119, fn. 3, IR001122, and in its Request for Agency Action. IR002903, IR002905, IR002920, IR002920, fn.12, IR002946. The Director's BACT analysis for the SRU was even more truncated than that for the FCCU and prior to the close of the comment period, the Director had completely failed to apply BACT to the DDU and VRU. As a result, no specific issues related to the Director's application of BACT to these emission units were ascertainable during or after the public comment period.

DETERMINATIVE LAW

Utah Admin. Code r.307-401-2(1) (2012).

Utah Admin. Code r.307-401-8 (2012).

STATEMENT OF THE CASE

I. Nature of the Case

Anyone living along the Wasatch Front has experienced first-hand our air pollution crisis, particularly wintertime “inversions” that settle on Salt Lake Valley for extended periods, causing concentrations of fine particulate matter (PM_{2.5}) to skyrocket and giving Utah the dubious distinction of having the nation’s worst air quality. We have all felt our eyes and lungs burn, fretted over whether to let our children outside to play, worried about parents and grandparents with heart problems – even taken them to the emergency room as their symptoms worsened – and watched our neighbors with asthma struggle to breathe.

Monitors quantify the degree of this public health emergency. In 2013, air quality along the Wasatch Front exceeded the country’s health-based standards – called National Ambient Air Quality Standards (NAAQS) – for at least 47 days – sometimes exceeding the standard by 100%. This means that for more than a month, our community – including its most vulnerable populations, the young and the old – were subjected to levels of air pollution considerably higher than concentrations deemed unsafe and unhealthy at exposures lasting only 24 hours.

The health consequences of our dirty air are significant. The findings of 3,000 published research papers underscore key concepts now accepted by the medical community worldwide. First, there is no safe level of exposure to particulate pollution and no threshold below which negative health effects disappear. People literally die from exposure. For every 10 $\mu\text{g}/\text{m}^3$ increase in $\text{PM}_{2.5}$ concentrations, community mortality rates rise 14%. IR001104. Therefore, Utah Physicians estimates that 1,400 to 2,000 premature deaths occur every year in Utah from $\text{PM}_{2.5}$. IR001106.

Air pollution has the same extensive, broad-based health consequences as cigarette smoke because the signature physiologic response is the same – low-grade arterial inflammation, narrowing of blood vessels and increased propensity for clot formation, resulting in an immediate increase in blood pressure, followed within hours by increased rates of heart attacks and strokes. IR001105-06.

The inflammation caused by $\text{PM}_{2.5}$ affects other organs. Particulate pollution penetrates every cell in the body, but is particularly well-documented in the brain. There, air pollution causes poor neurologic outcomes throughout the age spectrum, including loss of intelligence in children, higher rates of autism, and attention deficit disorders, as well as multiple sclerosis, Alzheimer's, and accelerated cognitive decline in the elderly. IR001106. Virtually every lung disease is caused or exacerbated and growth of lung function during childhood can be irreversibly stunted by air pollution exposure. IR001106-07. Cancers, including childhood leukemia, lung, breast, prostate, cervical, brain and stomach cancer, occur at higher rates among people exposed to more air pollution, while cancer survival rates are reduced. IR001107.

The blood vessel inflammation caused by air pollution also affects the placenta, arguably representing the most significant public health impact of air pollution. Women who breathe more air pollution have higher rates of adverse pregnancy outcomes, their newborn babies showing increased birth defects, genetic damage, and a life-long disease burden that includes higher rates of metabolic disorders, reactive airway disease, cardiovascular disease, cancer, Alzheimer's and all diseases consequent to immunosuppression. IR001107.

At the center of Utah's Wasatch Front are five refineries, including the Tesoro facility. These refineries contribute to our air pollution problem by directly emitting PM_{2.5}, as well as the pollutants that **form** fine particulate matter during our inversions – sulfur oxides (SO_x), nitrous oxides (NO_x) and volatile organic compounds (VOCs). These facilities represent a host of additional health risks. For example, when toxic substances are microscopically attached to fine particles, the health consequences are enhanced. Refinery particulate pollution is high in concentrations of attached hazardous air pollutants (HAPs) including heavy metals and polycyclic aromatic hydrocarbons (PAHs). IR001108.

Children living near petrochemical industries have higher PAH levels than adults, contributing to more DNA damage and endangering a more vulnerable population. Industrial-based pollution is more toxic to DNA than traffic-based pollution. Rates of leukemia are doubled in populations living in the vicinity of oil refineries. Benzene, a primary component of refinery emissions, is carcinogenic and harmful to a developing

fetus, causing low birth weight, delayed bone formation, bone marrow damage and low white blood cell and platelet counts. Exposure to benzene near the national standard is associated with sperm aneuploidy. Exposure to petrochemicals, specifically benzene, gasoline, and hydrogen sulfide is significantly associated with increased frequency of spontaneous abortion. IR001108-09.

Even infinitesimally low levels of exposure to PAHs, which are “endocrine disruptors,” may cause “endocrine or reproductive abnormalities, particularly if exposure occurs during a critical developmental window....[L]ow doses may even exert more potent effects than higher doses.” As a result, there are no safe doses for endocrine disruptors. IR001109.

In this context – a public health crisis affecting millions of Utahns – the Director issued a permit authorizing Tesoro to expand its facilities. At a time when state and federal law require the Director to reduce PM_{2.5}, NO_x, SO₂ and VOC emissions dramatically, he approved increases in the refinery’s direct annual emissions of PM_{2.5} by 4 tons and PM₁₀ by 6.6 tons, annual emissions of the PM_{2.5} and ozone precursors NO_x and VOCs by 27 and 28 tons respectively, annual emission of sulfuric acid by 7 tons and annual emission of CO by 9 tons. Annual refinery HAPs emission will increase by almost 9,000 pounds, or 4.5 tons a year, and will include 479 pounds of benzene, 2,660 pounds of hexane, 822 pounds of toluene, and 475 pounds of xylene a year.

Moreover, while Tesoro claims it will reduce its SO₂ air pollution, the Director has not lowered the daily SO₂ permit limit and it remains at pre-project levels. The Director has not required Tesoro to control or monitor SO₂ emissions from its flares, even though

flares are a significant source of SO₂ emissions. As a result, at a time when the Director must find every possible emission reduction from every polluting sector, he has allowed an increase in emissions and approved lax permit terms at a facility in the heart of the area plagued by chronic air pollution problems. He has failed to do what the law requires to protect public health.

As described below, the crux of Utah Physicians' challenge is that, in issuing the Tesoro approval order, the Director has failed to undertake the analysis and review of the permit applications and the assertions they contain mandated by law and necessary to protect public health. In essence, the Director's permitting decision is not sufficiently rigorous and is not supported by the record. The result is a permit that fails to give the citizens of Utah the legal protections to which they are entitled, does not require the control emissions at the refinery to the extent the law demands and fails to protect the public from air pollution.

II. Proceedings Below

On December 21, 2011, Tesoro Refining and Marketing Company (Tesoro) filed a revised Notice of Intent (NOI) seeking a permit, or approval order (AO), to expand its Salt Lake City refinery and increase its emissions of air pollutants (Expansion). On February 16, 2012, the Director released two intents to approve (ITAs) related to the Expansion that proposed applicable permit terms and conditions and issued two source plan reviews (SPRs) that articulated the Director's justification for those permit terms and conditions. The ITAs triggered a comment period that was extended twice, but ultimately ended on June 7, 2012. IR000747. Utah Physicians filed comments on the

ITAs on April 23, 2012, a date that, at one point, was the end of the comment period. IR000742.

After the close of the comment period, several documents were added to the record, including a response from Tesoro to the Director's request for "additional information and justification for Tesoro's conclusions" on best available control technology (BACT) for the refinery's fluidized catalytic cracking unit (FCCU). IR002887 (Director's "review would benefit from additional information and justification for Tesoro's conclusions (as presented in the...NOI)" on the question of "Tesoro's...BACT (in particular, reliance on prior BACT analysis[.]"); IR002476-2494 (Tesoro's post-comment period BACT justification). Utah Physicians had no opportunity to comment on these Tesoro documents.

On August 22, the Director released a document responding to comments made on the Expansion. On September 13, 2012, the Director issued two AOs authorizing the Expansion, one of which was revised on February 12, 2013. On October 15, 2012, Utah Physicians timely filed a Request for Agency Action (Request) challenging the two AOs and petitioned to intervene in the permit proceeding pursuant to Utah Code Ann. § 19-1-301.5, a law enacted on May 8, 2012.

On February 15, 2013, four months after Utah Physicians filed its Request, an administrative law judge (ALJ) was appointed to "conduct a permit review adjudicative proceeding based only on the administrative record and not as a trial de novo." Utah Code Ann. § 19-1-301.5(8)(a). The Record was produced, contested and Utah Physicians

filed both its Opening Brief and a Motion Requesting a Stay of the AOs (Stay Motion) on July 22, 2013.

Eventually, as envisioned by Utah Code Ann. § 19-1-301.5(11), the ALJ submitted a “proposed dispositive action” to the Executive Director of the Department of Environmental Quality (Executive Director) on July 10, 2014, “recommending” that Utah Physicians’ Stay Motion be denied, Exhibit “C,” attached, and another on September 9, 2014, “recommending” that the organization’s Request be denied. Exhibit “D,” attached. The Executive Director adopted the recommended orders on November 17, 2014 (Final Order), Exhibit “E,” attached, thereby dismissing Utah Physicians’ case. Utah Physicians appealed that Final Order to the Court of Appeals on December 15, 2014.

III. Statement of Facts

The Clean Air Act requires states to have legally enforceable procedures in their state implementation plans (SIPs) to prevent construction or modification of an industrial source that would violate any SIP control strategies or interfere with attainment or maintenance of the national ambient air quality standards (NAAQS). 42 U.S.C. § 7410(a)(2)(C), 40 C.F.R. § 51.160. These permitting programs must be approved by the U.S. Environmental Protection Agency (EPA), who ensures that they comply with Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR) permit requirements (at 42 U.S.C. §§ 7475 and 7503, respectively), as well as Minor New Source Review (NSR) permit requirements. 42 U.S.C. § 7410(a)(2)(C). Minor NSR requirements apply to, *inter alia*, minor modifications of a source that will

result in increases of emissions less than a pre-identified amount of a regulated contaminant.

In 1993, EPA approved and incorporated by reference Utah Admin Code r.307-401-8 (then numbered r.307-1-3.1.8) as a necessary component of Utah's SIP. 40 C.F.R. § 52.2320(c)(28)(i)(B). The provision applies to minor modifications. Although Utah may have leeway to come up with its Minor NSR program, once it does and once EPA approves that program, the state may **not** fail to comply with its provisions, including r.307-401-8, which is both a state and federal law.

A. FCCU Modifications Trigger BACT.

The fluidized catalytic cracking unit (FCCU) is at the core of the Tesoro refinery and is a significant source of air pollution. IR002796-801. The FCCU uses heat, pressure and catalysts to convert heavy oils into lighter products such as gasoline and diesel. IR000274.

By virtue of the Expansion, the FCCU is a “modified process unit” and will undergo substantial physical changes. IR000272, IR000274-75, IR000292, IR000294 (stating Expansion will result in “extensive physical changes to the FCCU”).

As these physical modifications will result in increased emissions of, *inter alia*, NO_x, SO₂, PM₁₀, PM_{2.5}, and CO, IR000301, IR000321, IR000688, the Director was required to undertake BACT analysis and derive a BACT-based emission limitation on the FCCU for each of these pollutants. Utah Admin. Code r.307-401-2(1); *Sierra Club*, 2009 UT 76, ¶¶ 4 & 47-48.

B. BACT Results in the Lowest Achievable Emission Limitation.

Under Utah’s federally approved SIP, the Director may issue an AO only if he determines that the “degree of pollution control for emissions...is at least BACT.” Utah Admin. Code r.307-401-8(1)(a); r.307-401-8(5) (“If the director determines that a proposed...modification...does not meet the conditions established in (1) above, the director will not issue an approval order.”).

BACT is defined as

an emissions limitation...based on the maximum degree of reduction for each air contaminant which would be emitted from any proposed...modification which the director, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such...modification[.]

Utah Admin. Code r.307-401-2(1); *Sierra Club*, ¶ 48 (holding “that it was unreasonable for the agency to adopt the 0.1 twenty-four hour emission limitation when there was evidence that a lower overall emission limitation was achievable[.]”). The goals of BACT emission limitations are: “(1) to achieve the lowest percent reduction, (2) to protect short-term ambient standards, and (3) to be enforceable as a practical matter.” *Sierra Club*, ¶ 4 (citing EPA, *New Source Review Workshop Manual*, B.6-.9).¹ “Once the BACT is selected for a new facility, an emission limitation based on that control technology is also imposed as part of BACT.” *Id.*

To determine the emission limit that represents the maximum achievable reduction in air pollutants, BACT “review is often conducted using the five-step ‘top-down

¹ Hereafter “NSR Workshop Manual.”

method,’ which in essence requires the applicant to adopt the most stringent control technology, unless it can show that the technology is not achievable due to energy, environmental, or fiscal impacts.” *Id.*; IR002477-78.

As this Court explained, BACT analysis begins with the identification of all available control technology options for each regulated pollutant. *Sierra Club*, ¶ 4 fn.2 (citing NSR Workshop Manual B.6-9); IR002477-78. “In effect, the reviewer must consider lower emitting processes and practices [and] add-on controls[.]” *Id.* Then, based on a “documented demonstration,” the “reviewer eliminates technically infeasible options.” *Id.* The control technologies are next ranked by “effectiveness” based on “based on efficiency, emission rate, and emission reductions.” *Id.*

Starting with the most stringent technology, the “reviewer” next “objectively” evaluates the economic, environmental, and energy impacts, “both beneficial and adverse,” of the technologies. *Id.* Only if this analysis “proves” that the first ranked technology is inappropriate, is that technology eliminated and the next most effective alternative evaluated. Based on this process, the most effective, achievable technology is proposed as BACT. *Id.*

C. Chronology and Substance of the Analysis Shows BACT for the FCCU is Inadequate.

The chronology and substance of record evidence that purports to document adequate BACT analysis and to determine “an emission limitation...based on the maximum degree of reduction for each air contaminant” that would be emitted from the proposed modifications to the FCCU are as follows:

1. BACT Before Close of Comment Period.

On June 7, 2012, at the close of the comment period, two short, almost identical paragraphs constituted the entirety of the BACT analysis for the Tesoro FCCU. First, in eight lines of text in its NOI, Tesoro stated:

Tesoro has conservatively considered BACT for the FCCU for emissions of particulate (PM₁₀/PM_{2.5}), NO_x, and SO₂ since there is expected to be an increase in actual emissions associated with the Project. A BACT analysis was recently conducted (2007) for the FCCU as part of the minor modifications to the FCCU to improve reliability (N0335-028). Continued operation of the ESP was selected as BACT for particulate emissions. The use of additional necessary SO_x reducing catalyst to meet NSPS limits was selected as BACT for SO₂ emissions. Additional NO_x control equipment would not be economically feasible; therefore Tesoro will continue to comply with its NO_x emission limit. Tesoro proposes to continue using these control technologies as BACT for the FCCU.

IR000321, Exhibit “F,” attached.

Second, the Director stated:

Tesoro has conservatively considered BACT for the emissions of particulate (PM₁₀/PM_{2.5}), NO_x, and SO₂ at the FCCU as there is expected to be an increase in actual emissions associated with this project. UDAQ agrees that continued operation of the ESP, use of SO_x reducing catalyst, reducing catalyst, and installation of a tail gas treatment unit (TGTU) at the SRU/TGI shall be considered BACT for this project. Tesoro shall comply with its established emission caps for these pollutants.

IR000668, Exhibit “G,” attached; IR002751 (same). In his BACT “analysis,” the Director specifically left out any mention of “recently conducted” BACT analysis that was part of the 2007 minor modifications to the FCCU. *Id.* The Director’s reference to “emission caps” means emission limits that are either source-wide (in the case of SO₂) or apply to the combined emissions from several units at the refinery (in the case of PM₁₀ and NO_x). IR000688, IR000675, IR000677, IR000682-5. Therefore, the Director’s

BACT analysis for the FCCU does not include any reference to any emission limitation specific to the FCCU. *See* Utah Admin. Code r.307-401-2(1) (BACT is “an emissions limitation...based on the maximum degree of reduction...which the director...determines is achievable”); *Sierra Club*, ¶ 4 (“Once the BACT is selected for a new facility, an emission limitation based on that control technology is also imposed as part of BACT.”).

2. *Utah Physicians’ BACT Comments.*

The Director is charged with deriving BACT emission limitations for the FCCU. *E.g.* Utah Admin. Code r.307-401-2(1), r.307-401-8(1)(a); r.307-401-8(5), *Sierra Club*, ¶¶ 4 & 47-48. Therefore, Utah Physicians focused its comments on the Director’s BACT analysis for the FCCU at IR000668 and IR002751. In its timely submission, Utah Physicians observed, *inter alia*, that the Director’s BACT analysis does not result in emission limitations on the pollutants considered, is not supported by the record, is out-of-date, fails to describe available technologies or removal efficiencies, neglects to estimate actual emissions achieved as a result of available controls, lacks documentation, particularly for cost estimates, conflicts with existing information, does not represent BACT, or the maximum achievable reduction of the air pollutants emitted by the FCCU, and was not the result of independent BACT analysis by the Director. IR001120-22, IR001112.

3. *BACT After Close of Comment Period.*

On July 17, 2012, based on comments received on or before June 7, 2012, the Director asked Tesoro to supply “additional information and justification” for the BACT conclusion the company already made in the NOI. IR002887 (requesting “additional

information and justification for Tesoro’s conclusions (as presented in the...NOI)” on the question of “Tesoro’s...BACT analyses (in particular, reliance on prior BACT analysis”). The Director did not ask Tesoro to reevaluate its NOI BACT based on this additional information. *Id.*

On July 25, 2012, Tesoro gave the Director a BACT analysis that purports to justify the eight lines of NOI BACT analysis. IR002476-94. The Director did not revisit, revise or reassess his six line BACT “analysis” for the FCCU in light of the July 17, 2012 justification. He stated that the “emitting units,” including the FCCU, “were adequately addressed in Tesoro’s revised NOI,”² noting:

With respect to the additional information on BACT applicability, Tesoro provided additional clarification on the emitting units specifically included in the Waxy Crude Processing project, but also revisited the BACT for the 2007 FCCU Reliability project.... UDAQ did not require that an additional BACT analysis be performed for the 2007 FCCU Reliability project. UDAQ considers the 2007 project and the current Waxy Crude Processing project to be separate projects. The emitting units included in the current project were adequately addressed in Tesoro’s revised NOI, and sufficient information was provided for UDAQ to properly review.

IR002019.

Thus, the only BACT analysis for the FCCU attributable to the Director is the six lines of undocumented text found at IR000668, IR002751. There is no evidence in the record that the Director considered the July 25, 2012 Tesoro justification for the company’s NOI conclusions. There is no evidence in the record that reflects the Director’s review of any detail or generality of Tesoro’s justification of its NOI BACT.

² Tesoro’s revised NOI is the NOI referenced throughout this document and includes the eight lines of BACT found at IR000321.

There is no record evidence that the Director evaluated or imposed emission limitations based on the best available control technology for each pollutant emitted from the FCCU. See Utah Admin. Code r.307-401-2(1) (BACT is “an emissions limitation...based on the maximum degree of reduction...which the director...determines is achievable”); *Sierra Club*, ¶ 4 (“Once the BACT is selected for a new facility, an emission limitation based on that control technology is also imposed as part of BACT.”).

The July 25, 2012 BACT justification reasserts that the technology at the facility – which was in place prior to 2006, IR002830,³ IR001172 (2006 NOI) – represents BACT for the FCCU. IR002476. The justification provides the first mention in the record of emission limitations in the context of BACT. *Id.*⁴ These are the FCCU emission limits imposed on the FCCU sometime before 2006. *Id.*, IR002830, IR001172. In its BACT justification, Tesoro makes no connection between its choice of technology – the technology already at the facility before 2006 – and the emission limitations – those already applicable to the FCCU – that the company claims are BACT:

The BACT analysis presented in the NOI concludes that no additional controls are cost effective. Tesoro is currently subject to emission limits of NO_x (174 tons per year), SO₂ (9.8 lbs/1,000-lb coke burn and 705 tpy⁵ SO_x), and particulate (1-lb PM/1,000-lb coke burn,⁶ 69 tons per year filterable PM₁₀) at the FCCU. These emission limits are consistent with the determination that current operations

³ The date on the first page of this document is correct, while the date at the bottom of each page is not. The 2006 BACT “analysis” is found in this document at IR001186-96.

⁴ The NOI BACT does reference “NSPS limits” for SO₂, but fails to specify what those limits are. IR000321 (“The use of additional necessary SO_x reducing catalyst to meet NSPS limits was selected as BACT for SO₂ emissions”).

⁵ Tons per year.

⁶ The 1-lb PM/1,000-lb coke burn limitation on FCCU PM emissions is not found in the AO. IR002801.

constitute BACT for the FCCU; therefore it is unnecessary to establish new emission limits as part of this AO.

IR002476.⁷

This post-comment BACT justification also claims, for the first time in the contemporaneous record, to undertake analysis for the CO emissions from the FCCU, remarking only that compliance with the existing, pre-2006 emission limitation, which corresponds to “best demonstrated technology” as of 2007. IR002492; 40 C.F.R. § 60.100a(b)(4).

4. *The 2006 FCCU Emission Limitations Were Not Derived from BACT Analysis.*

The record shows that the 2006 FCCU emission limits were **not** derived based on BACT and that there is no connection between the control technologies and the emission limitations. The 2006 emission limitations were explicitly calculated by adding baseline emissions at the refinery in 2006 to the number of tons per year “just under the significance threshold” to calculate the “new” emission limit. IR002840 (calculation in 2006 SPR), Exhibit “H,” attached; IR001183-84 (calculation in 2006 NOI), Exhibit “I,” attached; Utah Admin. Code r.307-101-2 (definition of “major modification” and definition of “significant” (40 tpy NO_x, 40 tpy SO₂ and 15 tpy PM₁₀)).

Specifically, the Director and Tesoro took the then-existing baseline emissions at the refinery for PM₁₀ (55 tpy), SO₂ (666 tpy) and NO_x (135 tpy) and added the number of tons per year for PM₁₀ (14 tpy), SO₂ (39 tpy) and NO_x (39 tpy) that would classify the

⁷ The entirety of Tesoro’s July 25, 2012 BACT is found at IR002473-94; *see also* IR002452, IR002464-66 (June 7, 2012 Tesoro Comment Letter).

modification as minor, rather than major, Utah Admin. Code r.307-101-2 (definition of “major modification” and definition of “significant”), to create a new emission limit for the FCCU – PM₁₀ (69 tpy), SO_x (705 tpy) and NO_x (174 tpy). IR002840 (2006 SPR); IR001183-84 (2006 NOI); IR000292 (“The emissions limit of 705 tpy SO_x at the FCCU on a 12-month rolling sum was based on the sum of the historical baseline actual annual emissions plus 39 tpy and was taken to maintain minor modification status for the 2007 FCCU Reliability Project.”). The resulting emission limits therefore were not based on BACT.

Therefore, in 2006, the Director did **not** impose emission limitations on the FCCU based on the control technology selected as BACT. *See* Utah Admin. Code r.307-401-2(1) (BACT is “an emissions limitation...based on the maximum degree of reduction...which the director...determines is achievable”); *Sierra Club*, ¶ 4 (“Once the BACT is selected for a new facility, an emission limitation based on that control technology is also imposed as part of BACT.”). The emission limitations were derived from adding baseline emissions to the number of tons per year just under the significance threshold. IR002840; IR001183-84; IR000292.

5. The 2012 FCCU Emission Limitations Were Not Derived from BACT Analysis.

In its July 25, 2012 BACT justification, Tesoro suggested that the 2006 emission limitations for PM₁₀ (69 tpy), SO_x (705 tpy) and NO_x (174 tpy) were based on BACT, stating that “[t]hese emission limits are consistent with the determination that current operations constitute BACT for the FCCU; therefore it is unnecessary to establish new

emission limits as part of this AO.” IR002476. These 2006 emission limits are those the Director imposed on the FCCU in 2012.⁸ IR002796; IR002797; IR002801. However, these FCCU emission limitations were derived from adding baseline emissions to the number of tons per year just under the significance threshold. IR002840; IR001183-84; IR000292. Therefore, in 2012, the Director did **not** impose emission limitations on the FCCU based on the control technology selected as BACT. *See* Utah Admin. Code r.307-401-2(1) (BACT is “an emissions limitation...based on the maximum degree of reduction...which the director...determines is achievable”); *Sierra Club*, ¶ 4 (“Once the BACT is selected for a new facility, an emission limitation based on that control technology is also imposed as part of BACT.”).

6. The Director’s Perfunctory Rejection of Evidence of Lower Achievable FCCU Emission Limitations.

Prior to the June 7, 2012, close of the comment period and in response to the Director’s six lines of BACT “analysis,” Utah Physicians submitted strong evidence that lower emission limitations are achievable at the Tesoro FCCU. *See Sierra Club*, ¶ 48 (holding it was “unreasonable for the agency to adopt the 0.1 twenty-four hour emission limitation when there was evidence that a lower overall emission limitation was achievable.”).

⁸ In his six line BACT analysis for the FCCU, the Director did not reference emission limitations on the FCCU, but rather stated that “Tesoro shall comply with its established emission caps for these pollutants.” IR000668. Emission caps are source-wide or apply to many emission units collectively. *E.g.* IR000688, IR000675, IR000677, IR000682-5.

First, the organization provided a 2007 study commissioned by the ten state and local air pollution control agencies of the Mid-Atlantic Region Air Managers Association (MARAMA) “assessing control measure options for petroleum refinery emissions,” IR001276, including FCCUs. IR001305-1330. The detailed, well-documented report “identifie[s] potential control measures for seven refinery processes and evaluate[s] the cost and technical feasibility of [those] controls.” IR001276. The second document is a 2008 consent decree between Holly Refining, a Salt Lake area facility and EPA. IR001469-1609. The decree sets forth control technologies and emission limitations that Holly agreed to meet at its Salt Lake area refinery FCCU by 2012 and 2013. IR001488-1501. Last is a 2007 EPA permitting document for the Big West refinery that identifies BACT and proposes BACT-based emission limits for the facility’s FCCU. IR001610-1659.

Each of these documents sets forth specific FCCU emission limitations for NO_x, SO₂, PM and CO based on control technologies available in 2008. Each emission limit is expressed in consistent units and averaging times. The analyses and consent decree consistently arrive at a consensus on achievable and available FCCU emission controls and attendant emission limitations. The MARAMA and the Big West documents include information key to adequate BACT analysis, including cost estimates. *See Sierra Club*, ¶ 4 fn.2.

Table 1 summarizes the findings of lower achievable FCCU emission limitation and compares them to the emission limitations first provided in Tesoro’s July 25, 2012 BACT justification, after the comment period closed.

FCCU BACT Limits	Pre-2006 Tesoro ⁹	Big West 2007	Holly Consent Decree 2008	MARAMA 2007
NO _x	174-tons/365-day IR002801	20 ppmvd ¹⁰ /365-day ¹¹ 40 ppmvd/7-day IR001624	20 ppmvd/365-day 40 ppmvd/7-day IR001488	20 ppmvd/365-day 40 ppmvd/7-day (all technologies) IR001328
SO ₂	9.8-lb/1000-lbs coke burned/7-day 705-tons/365-day IR002796	20 ppmvd/365-day 50 ppmvd/7-day (SO ₂ reducing catalyst) IR001626-7	20 ppmvd/365-day 50 ppmvd/7-day IR001494	20 ppmvd/365-day 50 ppmvd/7-day IR001328
PM	69-tons/365-day (filterable PM ₁₀) IR002801 ¹²		.5-lbs/1000-lbs coke burned IR001499	.5-lbs/1000-lbs coke/3-hour (WGS) 1-lbs/1000-lbs coke/3-hour (ESP) IR001328
CO	500 ppm by volume IR002797	50 ppm/365-day 78 ppm/30-day 500 ppm/1-hour IR001625 ¹³	100 ppmvd/365-day IR001500	200 ppmvd/1-hr 100 ppmvd/365-day IR001328 ¹⁴

⁹ These emission limitations are those first provided in Tesoro’s July 25, 2012 BACT justification, after the comment period closed. The Director’s six-line BACT analysis, which was subject to comment, made only general reference to “emission caps.” IR000321.

¹⁰ Part per million, by volume, dry basis, corrected to 0% oxygen.

¹¹ Rolling average – averaged over time period specified.

¹² In its July 25, 2012 BACT justification, Tesoro claims that it is subject to a 1-lb/1000-lb coke emission limitation (no averaging period specified). IR002476. This emission limitation is not in the AO. IR002801.

¹³ The CO emission limitation for an FCCU with a CO boiler is 500 ppmvd/1-hr and 100 ppmvd/365-day. The Tesoro refinery is equipped with a CO boiler.

¹⁴ This emission limitation applies to an FCCU with a CO boiler – the current technology at the Tesoro refinery.

The Director refused to consider the analysis or substance of any of the three documents, rejecting them summarily because “[w]ith the exception of EPA’s Big West Permit the documents referenced by the comment are not NSR permitting documents and any limitations established by them were not established for BACT purposes.”

IR001987. The Director acknowledged that the Big West document “could be consulted in an NSR BACT analysis,” but that “[s]electively identifying permit limits from a variety of documents and stating that those limits are BACT bypasses the case-by-case review process required by BACT’s very definition.” *Id.*

7. The Director’s BACT “Analysis” of the SRU, DDU and VRU.

The Expansion Project will also entail modifications to or changes in method of operation of the SRU, DDU and VRU. IR000689 (“Physical changes will be made to the SRU affected facility as part of the Project, including installation of a TGTU.”); IR000341 (same); IR000304 (“To accommodate the recycle gas from the TGTU, the existing undersized spare SRU air blower may be upgraded.”); IR000343-44 (“New and replaced fugitive components in VOC service will be installed in a number of existing process units, including the...VRU, DDU [and] SRU...New fugitive components will become part of the existing emission unit for the respective families of process equipment. The emissions increase is calculated based on the counts of new components within the existing emission units.”); IR000340 (“The SRU/TGI will experience an increase in utilization as a result of the Project.”); IR001980 (referencing “emissions from the TGTU augmented SRU”).

As a result of the Expansion, emissions from these units will increase unless controls are applied. IR000301 (including SO₂ increases from SRU flare); IR000279 (“The increase in throughput of lighter products from the FCCU and upgrades to the DDU could result in an increase in sulfur in the feed to the SRU.”); IR000325.

Prior to the close of the comment period, Tesoro’s BACT analysis for the sulfur recovery unit (SRU) consisted of the following: “Tesoro proposes to install a TGTU at the SRU to reduce facility SO₂ emissions. Tesoro considers the TGTU to be BACT for SO₂ emissions from the SRU.” IR000321, Exhibit “F.” Likewise, the Director stated that “installation of a tail gas treatment unit (TGTU) at the SRU/TGI shall be considered BACT for this project. Tesoro shall comply with its established emission caps for these pollutants.” IR000668, Exhibit “G”; IR002751 (same). At the close of the comment period, the record contained no BACT analysis for the DDU and VRU. IR000688; IR000321-22.

Utah Physicians commented on the SRU BACT, noting that the daily SRU emission limit for SO₂ was not reduced by virtue of the installation of the TGTU, the record lacked any analysis to support the contention that TGTU is BACT, the record did not support the assertion that an annual emission limitation (60 lbs/yr) could be BACT, and that an adequate BACT emission limitation for the SRU must be short-term or averaged over a short period of time. IR001118, IR001119, IR001119, fn. 3, IR001122; IR001112.

After the close of the comment period, Tesoro undertook a four-line BACT “analysis” for the DDU and VRU for the first time. IR002476; IR001989 (same

language in Response to Comments); IR002466 (same). This analysis includes no citation, documentation, listing of available control technology, references no emission limitation, and claims that “venting to the flares serves as the work practice standards under BACT.”)

Also after the close of the comment period, the Director adopted Tesoro’s response to Utah Physicians’ comments, IR002463, reversing his position that the SRU/TGI was subject to BACT, claiming for the first time that “the SRU is not being modified as part of the permitting action,” and arguing that Tesoro may “voluntarily” install technology to reduce its emissions without prior approval. IR001982 (*citing* Utah Admin. Code r.307-401-12); IR001989.¹⁵

SUMMARY OF ARGUMENT

An early goal of the Clean Air Act was that by 1975, every state would attain NAAQS, thereby securing for its citizens the public health benefits of cleaner air. Yet, in 2015, the aim of achieving the national standards still alludes Utah, making adherence to key components of the law even more critical to improving air quality and making our communities safe. BACT helps Utah move steadily toward the NAAQS, while ensuring that the concentrations of less problematic pollutants stay low. BACT is a promise to Utah’s citizens that as industrial sources expand and increasingly threaten our airshed, the

¹⁵ The sections above serve to marshal the evidence that arguably supports the Director’s permitting decision. In addition, the Director’s Responses to Comments 26-33 address BACT, but not in a way relevant to this appeal. IR001983-88. Also, the 2006 FCCU BACT is found at IR001186-96.

Director will impose on them emission limitations that reflect the maximum reductions of air pollutants achievable.

However, the record reveals that in applying BACT to the Tesoro expansion, the Director falls well short of this promise. Relying on mere assertion, the Director does not undertake the analysis necessary to derive a legally defensible emission limitation that reflects application of the best available control technology to the Expansion. Rather than examining the emission controls that similar sources employ and the lower emission limits they achieve, the Director simply reaffirms the use of pre-2006 technologies and pre-2006 emission limits at the refinery. Rather than ensuring that emission limitations at Tesoro will protect short-term standards designed to prevent abrupt spikes in air pollution concentrations, the Director sticks with old limitations that control emissions only over the long-term and that fail to restrict the release of fine particulate matter – the very pollutant that is the cause of our most severe wintertime inversions.

Instead of considering information about successful implementation of BACT at other refineries across the nation, the Director narrows the scope of his review to only the undocumented claims made by the source he is regulating. And finally, rather than making a concrete connection between the best control technologies and the emission reductions they can achieve, the Director accepts out-of-date emission limitations that were not calculated on the basis of BACT at all.

Ultimately, because the health and well-being of our families, communities and environment are at stake and because BACT plays a crucial role in achieving our national and local goal of clean, breathable air, Utah Physicians asks this Court to remand the

Director's BACT decision so that he can undertake adequate analysis to derive limitations for the refinery that will truly reflect the reductions that today's technologies are capable of delivering.

ARGUMENT

I. The Director's Application of BACT to the FCCU Is Neither Legally Sufficient nor Supported by the Record.

A. The Only BACT "Analysis" Attributable to the Director is Legally Insufficient and Consists of Mere Assertion that Lacks a Basis in the Record.

The six lines of text that he presented to the public for comment on February 16, 2012, comprise the only BACT analysis that can be attributed to the Director. It is true that after the close of the comment period, the Director asked Tesoro to supply "additional information and justification" for the BACT conclusion the company already made in the NOI. IR002887 (requesting "additional information and justification for Tesoro's conclusions (as presented in the...NOI)" on the question of "Tesoro's...BACT analyses (in particular, reliance on prior BACT analysis)"). However, the Director did not ask Tesoro to reevaluate its NOI BACT based on this additional information. *Id.* Moreover, there is nothing in the record to suggest that the Director objectively reviewed the justification, much less that he reevaluated his BACT analysis in light of company's submission. Rather, the Director insisted that the additional BACT justification was unnecessary and that the "emitting units," including the FCCU, had already been "adequately addressed in Tesoro's revised NOI."¹⁶ IR002019.

¹⁶ Tesoro's revised NOI is the NOI referenced throughout this document and includes the eight lines of BACT found at IR000321.

1. The Record Does Not Support the Director's BACT Assertions.

In total, the Director's BACT analysis states "that continued operation of the ESP, use of SO_x reducing catalyst, reducing catalyst, and installation of a tail gas treatment unit (TGTU) at the SRU/TGI shall be considered BACT for this project. Tesoro shall comply with its established emission caps for these pollutants." IR000668, IR002751. Given that what amounts to six lines of text, the substance of which is quoted above, constitutes the entirety of the Director's efforts to comply with BACT, his contention that he complied with r.307-401-8 is unsustainable. There is nothing in the record to show that the Director objectively evaluated any of the factors – or anything like the factors – outlined in EPA's five-step, top-down method. *Sierra Club*, ¶ 4, fn.2 (citing *NRS Manual* B.6-9). The record is devoid of documentation, a pollutant-by-pollutant analysis, a list of available technologies, a ranking of controls based on their effectiveness and efficiency and achievable emission rates and reductions or the consideration of economic, environmental, or energy impacts. *Id.* As a result, there is no record evidence to show that the Director derived emission limits from a defensible BACT analysis that actually represent the most stringent technology and the maximum reduction of emissions achievable FCCU. Utah Admin. Code r.307-401-2(1); *Sierra Club* ¶¶ 4, fn.2, 47-48.

Under similar circumstances, this Court determined that there was not substantial evidence in the record to support the Director's contention that he undertook the requisite 18-month review of a PSD permit: "A record limited to a Post-it note indicating that someone was contacted regarding a review is woefully inadequate to convince a reasonable person that a review took place, let alone that the review was sufficiently

rigorous to ensure that an approval order implemented the best control technology and would not tie up increment limits unnecessarily.” *Kennon v. Air Quality Board*, 2009 UT 77, ¶ 28, 70 P.3d 417.

Here, the record is limited to the Director’s six lines of BACT analysis, IR000668, and the comment that “sufficient information was provided for UDAQ to properly review.” IR002019. As in *Kennon*, where “testifying parties were unable to provide any specifics, such as exactly how many or which permits were compared to that issued to the Power Company,” *Kennon*, ¶ 28, the present record reveals nothing at all explicit about the Director’s review of BACT or the basis for his BACT determination sufficient to show that the Tesoro “approval order implemented the best control technology.” *Kennon*, ¶¶ 28 & 27 (“a letter from the Division indicating that a review had been completed” was insufficient to show the 18-month review was supported by substantial evidence).

2. The Director’s Analysis Failed to Result in an Emission Limitation Reflective of BACT.

Beyond the fact that there is no basis in the record to support his analysis, the results of the Director’s BACT analysis are **legally** insufficient. The Director fails to further the articulated goals of BACT – the maximum achievable reduction of air contaminants, protection of short-term NAAQS and practical enforceability. *Sierra Club*, ¶ 4, Utah Admin. Code r.307-401-2(1). Moreover, the Director does not establish or impose on the FCCU an emission limitation that is reflective of BACT. *Id.* Indeed, the Director makes no connection between the control technologies he identifies as BACT

for the FCCU and any emission limitations that he imposes on the unit as a consequence of his analysis. *Id.*

Unless the record demonstrates that an emission limitation is infeasible, BACT is imposed as an emission limitation. BACT is defined, first and foremost, as “an emissions limitation.” Utah Admin. Code r.307-401-2(1). Accordingly, this Court emphasized that the ultimate result of BACT is the imposition of an emission limitation. *Sierra Club*, ¶ 4 (“Once the BACT is selected . . . an emission limitation based on that control technology is also imposed as part of BACT.”); *id.* ¶ 47 (describing the goals of “BACT emission limitations”); ¶ 48 (finding “it was unreasonable for the agency to adopt the 0.1 twenty-four hour emission limitation when there was evidence that a lower overall emission limitation was achievable.”); *NSR Manual* at B.56 (“To complete the BACT process, the reviewing agency must establish an enforceable emission limit for each subject emission unit at the source and for each pollutant subject to review that is emitted from the source.”).

Only “in limited circumstances,” where there is a demonstration of infeasibility, may the “permitting authority substitute work practices, operational standards, design or equipment limitations for numeric limits to satisfy BACT.” *Indeck-Elwood*, 13 E.A.D. 126, 175 (EAB 2006), Exhibit “J,” attached; *NSR Manual*, B.56 (Only “if technological or economic limitations in the application of a measurement methodology to a particular

emission unit would make an emissions limit infeasible, a design, equipment, work practice, operation standard, or combination thereof, may be prescribed.”).¹⁷

Here, the Director derives no BACT-based emission limitation. Rather, he states without reference to control technologies or the emission reductions of which they are capable that “Tesoro shall comply with its established emission caps for these pollutants.” IR000668. The Director’s reference to “emission caps” – limits that apply to the entire source or to the combined emissions from several units at the refinery, IR000688, IR000675, IR000677, IR000682-5 – means that the Director’s BACT analysis for the FCCU does not include emission limitations specific to the FCCU. *See* Utah Admin. Code r.307-401-2(1) (BACT is “an emissions limitation...based on the maximum degree of reduction...which the director...determines is achievable”); *Sierra Club*, ¶ 4 (“Once the BACT is selected for a new facility, an emission limitation based on that control technology is also imposed as part of BACT.”). Thus, the Director has failed to comply with the most basic tenets of BACT – that is to compare, adopt and impose an emission limitation based on the maximum achievable reduction of air contaminants.

¹⁷ Apparently, the procedures that apply to a permit review adjudicative proceedings, Utah Code Ann. § 19-1-301.5, were inspired by the process by which EPA decision are appealed to the Environmental Appeals Board (EAB), an administrative appeals court within EPA. *See* Utah Senate Floor Debate, 2012 General Session, Day 3, Senate Bill 11, 01:08:41-01:09:45 (“[W]e have now aligned our appeals process up with the EPA appeal process.”); Utah House of Representatives Floor Debate, 2012 General Session, Day 10, Senate Bill 11, 00:40:00-00:47:00 (“[M]y understanding is that the changes we are making to these appeals processes are either using or bringing us closer to the appeals process used by [EPA].”). Therefore, EAB cases can be instructive to the present inquiry, particularly those that address air quality permitting.

3. The BACT Emission Limitations Fail to Protect Short-Term NAAQS.

EPA established short-term NAAQS because spikes in air pollution of a shorter duration are as harmful to public health and the environment as long-term exposure to lower levels of pollution. Short-term NAAQS include standards based on one-hour concentrations of NO_x and SO₂. 75 Fed. Reg. 35520 (June 22, 2010) (finalizing the 1-hour SO₂ NAAQS); 75 Fed. Reg. 6474 (February 2, 2010) (finalizing the 1-hour NO₂ NAAQS). As a result, concentrations of SO₂ and NO_x, averaged over a one-hour period, may not exceed these standards.

This Court recognized that a key “goal of BACT emission limitations” is “to protect short-term ambient standards.” *Sierra Club*, ¶ 47. The EAB too has determined that BACT emission limits must be shown to protect the one-hour NAAQS. Specifically, the EAB has determined that legally defensible BACT must be shown to be protective of the one-hour NO_x and SO₂ NAAQS. *Miss. Lime Co.*, slip op. 42-45, 15 E.A.D. __ (EAB Aug. 9, 2011), Exhibit “K,” attached. As a result, without an adequate explanation in the record, emission limits for SO₂ and NO_x averaged over three hours were not sufficient to protect the one-hour NAAQS. As this Court explained, “[o]n remand, IEPA must either include maximum allowable hourly emissions limitations for SO₂ and NO_x and explain how it concluded that the limitations are protective of the respective one-hour NAAQS or provide sufficient rationale for not including such emissions limitations.” *Id.* at 45 (“In light of the express EPA directive to include emission limitations based on one-hour averages, IEPA’s unsupported reasoning for not doing so is inadequate.”). As EPA reiterates, “BACT emission limits or conditions must be met on a continual basis at all

levels of operation (e.g., limits written in pounds/MMbtu or percent reduction achieved), demonstrate protection of short-term ambient standards (limits written in pounds/hour)[.]” *NSR Manual*, B.56; *see also* U.S. EPA 1-Hour SO₂ NAAQS Guidance Memo at 7.

Finally, in addition to his obligation to protect short-term NAAQS by imposing appropriate BACT emission limitations, the Director has an independent duty to ensure that any modification will comply with NAAQS, including all short-term standards. Utah Admin. Code r.307-401-8(1)(b)(vii); r.307-401-8(5). As a result, it is incumbent on the Director to impose one-hour emission limitations on emission units subject to BACT and to otherwise ensure that the AO protects short-term NAAQS.

However, these obligations were not fulfilled. In July 25, 2012, once Tesoro finally got around to specifying the emission limitations it correlated to its BACT “analysis,” with its contention that existing controls at the facility are the best available, it became clear that these emissions do not protect short-term NAAQS. This is because, in most instances, these emission limitations have very long averaging times. For example, the NO_x emission limits on the FCCU are stated only in terms of a 12-month rolling average (174 tons per year), IR002824, while the SO_x limits are based on a 12-month rolling average (705 tons per year) and a seven-day average (9.8 lbs per 1000 lbs coke

burned), IR002812-19, and the PM limit is also on a 12-month rolling average of 69 tons per year.¹⁸ *Id.*¹⁹

Thus, although this Court, EPA and EAB have confirmed that a BACT emission limitation must be shown to protect short-term NAAQS, particularly the one-hour SO₂ and NO_x standards, the Director did not come up with any BACT-based FCCU emission limit, much less a limitation that safeguards short-term NAAQS. This lapse is yet another reason to remand the AO so that, with meaningful opportunity for public comment, the Director can derive a legally sufficient emission limitations that, *inter alia*, reflects BACT, is objective and well-documented and protects short-term NAAQS.

4. The Director's BACT Analysis is Inadequate Because it Fails to Result in an Emission Limitation on PM_{2.5}.

Although the Tesoro Refinery is located in an area that is not meeting PM_{2.5} NAAQS and often has the worst PM_{2.5} air pollution spikes in the nation, the Director did not impose a BACT-based PM_{2.5} emission limitation on the FCCU. Even though the Expansion will result in a 3.89 tons per year increase in PM_{2.5} emissions from the FCCU, IR000301, the Director did not come up with a PM_{2.5} emission limitation for the unit. *See* IR002476, IR002464.

¹⁸ Importantly, while the refinery claims that there is a PM emission limitation based on this BACT analysis, the refinery is mistaken. There is **not** an emission limitation on PM from the FCCU of 1-lb PM/1,000-lb coke burn. *See* IR002824-45 (AO PM conditions).

¹⁹ As this is largely a legal issue and an issue of omission, it is difficult to find “evidence” to support the Director’s position. To the extent it exists, it can be found at IR001976, IR001979, IR001989, IR002004; *see also* IR002806-2828 (Approval Order).

Yet, the Director is obligated to derive a PM_{2.5} emission limitation representative of BACT for the FCCU. Utah Admin. Code r.307-401-2(1) defines BACT as “an emissions limitation...based on the maximum degree of reduction **for each air contaminant** which would be emitted from any proposed stationary source or modification[.]” PM_{2.5} is plainly encompassed by the definition of air contaminant. Utah Admin. Code r.307-401-2(1). The Tesoro Refinery FCCU will emit PM_{2.5} and, indeed, increases in PM_{2.5} emissions from the FCCU will result from the Expansion. IR000301. However, the Director’s BACT analysis does not result in any emission limitations that controls in any way, much less to the maximum degree possible, emissions of PM_{2.5} from the FCCU. Moreover, there is nothing in the record to indicate why any such emission limit may be infeasible. As a result, the Director’s BACT analysis is indefensible.

5. The Subpart Ja Emission Limitations for an FCCU Are the Minimum BACT Emission Limitations that Must Apply to the Tesoro Refinery.

As Tesoro Refinery admits, the emission limitations “recently established in NSPS Subpart Ja for FCCU’s [sic] at the petroleum refineries” are “based on an analysis of best demonstrated technology” and therefore are relevant to determining BACT for CO emissions at the FCCU. IR002492. Indeed, for the very reason Tesoro recognizes – that the NSPS represent “best demonstrated technology” – these rules establish the floor for any sound analysis and the minimum emission limits that must be imposed pursuant to BACT review. Utah Admin. Code r.307-401-2(1) (“In no event shall application of

[BACT] result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR parts 60 and 61.”²⁰

Importantly, the Ja FCCU emission limitations represent EPA’s considered assessment of what reflected “best demonstrated technology” in 2008, 73 Fed. Reg. 35838, 35839 (June 24, 2008). In setting these limits, EPA was clear that prior to 2008, these emission levels were achievable in a cost effective manner at every FCCU. *Id.* at 35846 (“Given the number of FCCUs currently meeting the 50/25 ppmv SO₂ emission limit, we conclude that this limit is technically feasible” and is “cost- effective for new, reconstructed, and modified fluid catalytic cracking units.”); *id.* at 35847 (finding with regard to the NO_x limitation that in 2008 “data collected from FCCU complying with consent decrees show that [the 80 ppmv] can...be met using combustion controls” and therefore “provide[s] cost-effective NO_x control with limited or no secondary impacts.”); *id.* at 35844 (noting that in setting the PM emissions limitation, EPA “fully account[ed] for plant size, partial-burn versus full-burn regeneration, existing control configuration, and specific consent decree requirements” to arrive at an emission limit based on cost-effective, feasible and demonstrated technology).

Thus, because the Ja emission limits reflect 2008-era control technology that EPA has determined to be broadly achievable, the Director’s failure to begin his BACT analysis with these NSPS limits cannot be defended. Indeed, in the present case, the relevant NSPS regulations were more than four years old when the Director undertook

²⁰ Subpart Ja NSPS is located in 40 C.F.R. part 60.

his BACT analysis, further underscoring that the record cannot support this review. Despite the fact that the Ja regulations establish a floor for any legally defensible BACT analysis, the Director ignored the Ja FCCU emission limitations and failed to acknowledge that these limits, by definition, represent cost effective, feasible and demonstrated technology as of 2008.

6. *The Big West, MARAMA and Holly Consent Decree Evidence Further Establish that the Director's BACT Analysis is Unreasonable.*

BACT analysis must ultimately lead to an emission limitation that has been demonstrated to represent the most stringent technology and the maximum reduction of emissions achievable by the source. *Sierra Club*, ¶¶ 4, 47-48. Therefore, when there is evidence that a lower emission rate can be attained, a proposed BACT limit that does not implement this more stringent control is not reasonable. *Id.* at ¶¶ 47-48.

Applying this analysis, this Court found that the record did not support the Director's determination that a 0.1 twenty-four-hour NO_x limitation was BACT where the Director "did not provide sufficient evidence that this same limitation achieved the maximum reduction of nitrogen oxides possible." *Id.* at ¶ 48. Although the Director and the source insisted that the 0.1 twenty-four-hour average was comparable to a lower thirty-day average achieved at other facilities using the same technology, "[t]his argument...was supported with scant evidence." *Id.* Ultimately, this Court set aside the Director's BACT determination because "there was evidence that a lower overall emission limitation was achievable[.]" *Id.*

The EAB too has recognized that while rejection of more stringent limitations is not a *per se* violation of BACT requirements, the permit issuer must provide an appropriate rationale in light of any such evidence in the record. *Newmont Nev. Energy Inv.*, 12 E.A.D. 429, 443 (EAB 2005); *Steel Dynamics, Inc.*, 9 E.A.D. 165, 224-25 (EAB 2000) (remanding BACT limitation where permit issuer failed to provide adequate explanation for why limits deviated from those of other facilities). As a result, EPA had not adequately considered and documented its determination of a PM emission limit representative of BACT where the agency ignored record evidence of lower emission limits at similar facilities: “The permit issuer has an obligation to adequately explain its rationale for selecting a less stringent emission limit, and that rationale must be appropriate in light of *all* the evidence in the record.” *Pio Pico Energy Center*, slip op. 93 (internal punctuation omitted), Exhibit “L,” attached. As EAB reasoned:

The existence of a similar facility with a lower emissions limit creates an obligation for the permit applicant and permit issuer to *consider and document* whether the same emission level can be achieved at the proposed facility. *Id.* Simply stating that PM emissions vary even on identical turbine models, without considering and documenting BACT limits and emission rates from existing facilities with the same turbine model, is not sufficient to satisfy this obligation.

Id. (emphasis in original) (citing *Miss. Lime Co.*, slip op. 33, 15 E.A.D. __ (EAB Aug. 9, 2011)) (noting importance of carefully evaluating multiple sources and data points as well as information such as recent permit limits at similar facilities); *NSR Manual*, B.24 (“In the absence of a *showing of differences* between the proposed source and previously permitted sources achieving lower emissions limits, the permit agency should conclude that the lower emissions limit is representative for that control alternative.”). Therefore,

because there is credible evidence in the record, the Director has the “obligation to adequately explain [his] rationale,” if any, “for selecting a less stringent emission limit, and that rationale must be appropriate in light of *all* the evidence in the record.” *Pio Pico Energy Center*, slip op. 93.

Instead, the Director refused to consider the substance of any of the three documents submitted by Utah Physicians, rejecting them either because they were not “NSR permitting documents and any limitations established by them were not established for BACT purposes,” or because “[s]electively identifying permit limits from a variety of documents and stating that those limits are BACT bypasses the case-by-case review process required by BACT’s very definition.” IR001987. Plainly, this approach is contrary to *Sierra Club*, as well as EAB’s holdings.

First, the Director has essentially ruled out the relevance of **any** evidence of lower emission limitations at similar facilities, something the cases above soundly reject. Indeed, the BACT is aimed at examining the emission controls and the attendant emission limitations at similar sources and the failure to undertake this inquiry is fatal. *See Indeck-Elwood, LLC*, 13 E.A.D. 126, 183 (EAB 2006) (“Contrary to IEPA’s protestations, the existence of a similar facility with a lower emissions limit creates an obligation for Indeck (and IEPA) to consider and document whether that same emission level can be achieved at Indeck’s proposed facility.”).

Second, in his “analysis” the Director has neglected to even articulate, much less address any emission limitations at any other FCCUs or to explain why the Tesoro FCCU could not achieve the lower emission limits attained at these similar sources. *Sierra*

Club, ¶ 48 (rejecting Director’s BACT in part because of scant evidence that chosen emission limit was comparable to the lower 30-day average limitation). Therefore, the Director is in no position to discard, without examination, record evidence of the exact type that is germane to an adequate BACT review. *Indeck-Elwood, LLC*, 13 E.A.D. 126, 184 (EAB 2006) (“In the present case, there is no indication in the record or in IEPA’s brief that either Indeck or IEPA expressly considered a more stringent PM standard than the one specified in Indeck’s PSD permit. Rather, it seems that Indeck identified the less stringent...PM limit as BACT for the proposed plant without a sufficient analysis in the record of why it was rejecting the other possible PM limits.”).

Thus, because the documents include evidence of lower emissions limitations achieved at refinery FCCUs – evidence that a permit writer should seek out – the Director was unreasonable to reject the Big West, MARAMA and Holly Consent Decree evidence. Similarly, the Director has not explained why, in light of this evidence of lower emissions limitations that reflect the application BACT to FCCUs across the Nation, similarly stringent emission limits cannot be achieved at the Tesoro refinery. As a result, the Director’s BACT compliance is unlawful and without foundation in the record.

7. The Director May Not Rationalize His BACT Analysis Based on Factors He Did Not Consider or on Evidence He Did Not Cite.

Finally, the Director must be held to his BACT analysis. This is because, in deciding “on the record” appeals of agency action, the federal courts have consistently held that an agency decision must be reviewed on the basis articulated by the agency at

the time it made its decision: “Because the arbitrary and capricious standard focuses on the rationality of an agency’s decisionmaking process rather than on the rationality of the actual decision, [i]t is well-established that an agency’s action must be upheld, if at all, on the basis articulated by the agency itself.” *Olenhouse v. Commodity Credit Corp.*, 42 F.3d 1560, 1575 (10th Cir. 1994) (quoting *Motor Vehicle Mfrs. Ass’n v. State Farm*, 463 U.S. 29, 50 (1983)). “The agency must make plain its course of inquiry, its analysis and its reasoning. After-the-fact rationalization by counsel in briefs or argument will not cure noncompliance by the agency with these principles.” *Id.* (citing *American Petroleum Inst. v. EPA*, 540 F.2d 1023, 1029 (10th Cir. 1976)). Where “limitations in the administrative record make it impossible to conclude the action was the product of reasoned decisionmaking,” the reviewing court “may not simply affirm.” *Id.*

This reasoning is followed by EAB. When EPA failed to analyze performance data relevant to establishing a BACT emission limit until after the close of the comment period, the EAB held: “The Region’s post-hoc analysis comes too late; the analysis should have been part of the record available for public comments before the Region determined the final PM BACT limits.” *Pio Pico Energy Center*, slip op. 95, 16 E.A.D.____ (EAB 2013); *Indeck-Elwood, LLC*, 13 E.A.D. 126, 162 n.68 (EAB 2006) (noting that permit issuer must articulate the reasons for its conclusion and must adequately document its decisionmaking as part of the permit decision itself and not for the first time on appeal); *Steel Dynamics, Inc.*, 9 E.A.D. 165, 224-25 (EAB 2000) (remanding BACT limitation where permit issuer failed to provide adequate explanation for why limits deviated from those of other facilities). Moreover, because there was no

analysis of performance data showing a majority of data points below the chosen PM emission limit, the EAB remanded the BACT analysis, concluding “[t]he Region’s footnote does not analyze these data in detail nor explain how, if at all, they affect the Region’s PM BACT determination for Pio Pico, and more importantly, neither do the Fact Sheet nor the response to comments document.”). *Pico Energy Center*, slip op. 96.

Therefore, the Director may not now contend that his BACT “analysis” and conclusions were based on Tesoro’s July 25, 2012 justification. IR002019. First, as established above, there is no evidence that he did so. Indeed, the record shows that the Director did not rely on the justification because he concluded that BACT for the FCCU was “adequately addressed in Tesoro’s revised NOI.” IR002019. Second, a passing comment that “sufficient information was provided for UDAQ to properly review,” *id.*, is not adequate “to convince a reasonable person that a review took place, let alone that the review was sufficiently rigorous to ensure that an approval order implemented the best control technology[.]” *Kennon*, ¶ 28. Third, had the Director relied on the July 25, 2012 justification, it “should have been part of the record available for public comments before the” Director “determined the final...BACT limits” for the FCCU. *Pio Pico Energy Center*, slip op. 95. In any case, as established below, reliance on the Tesoro analysis cannot remedy the Director’s otherwise arbitrary and capricious BACT analysis.

B. Tesoro’s Pre-Comment Period BACT “Analysis” is Legally Insufficient and Consists of Mere Assertions that Lacks a Basis in the Record.

As established above, Tesoro’s BACT contentions cannot be attributed to the Director. In any case, reference to the company’s pre-comment period BACT cannot

cure the deficiencies that plague the Director’s efforts to apply BACT to the FCCU. Just as the Director’s BACT has no basis in the record, Tesoro’s initial BACT “analysis” – the only Tesoro analysis subject to public comment, IR000321 – lacks a record foundation. As was true of the Director’s BACT assertions, there is nothing in the record to show that Tesoro objectively evaluated any of the factors – or anything like the factors – outlined in EPA’s five-step, top-down method. *Sierra Club*, ¶ 4 fn.2 (citing NSR Workshop Manual B.6-9). As a result, there is no record evidence documenting that Tesoro undertook a defensible BACT analysis or derived emission limits that actually represent the maximum achievable reduction in air pollutants for the FCCU. Utah Admin. Code r.307-401-2(1); *Sierra Club* ¶¶ 4, 47-48.²¹

Similarly, Tesoro makes no connection between the control technologies the company identifies as BACT for the FCCU and any emission limitations imposed on the unit as a consequence of this analysis. *Sierra Club*, ¶ 4, Utah Admin. Code r.307-401-2(1). Also, because Tesoro does not establish an FCCU emission limitation that is documented as reflecting BACT, Tesoro’s analysis does not achieve the stated goals of securing the maximum achievable reduction of air contaminants, protecting of short-term NAAQS or instituting a practical mechanism for enforcing BACT. *Sierra Club*, ¶ 4, Utah Admin. Code r.307-401-2(1).

²¹ In each instance, Tesoro eliminated not just the most effective control technology. For each contaminant, the company consistently rejected each of the more efficient controls in favor of the least effective technology. IR002488, IR002491, IR002494.

C. Tesoro's Post-Comment Period Justification Undermines the Director's Authorization of Existing Limits and Controls as BACT.

When asked by the Director to justify its decision to continue operating with pre-2006 technology and emission limitations, Tesoro reasserted that “[t]he BACT analysis presented in the NOI concludes that no additional controls are cost effective,” recited the emissions limitations that have applied to the facility for years and concluded that these “limits are consistent with the determination that current operations constitute BACT for the FCCU; therefore it is unnecessary to establish new emission limits as part of this AO.” IR002476.

As has been established already relative to the Director's BACT, Tesoro's justification of its pre-2006 emission limitations fails to look at emission levels that are being achieved at similar sources or explain why Tesoro cannot attain any more stringent limits.²² Moreover, as the Big West, MARAMA and Holly Consent Decree evidence shows, similar sources **are** consistently employing more stringent controls **and** are achieving lower emission limitations. Therefore, Tesoro is obligated to identify, consider and document whether the same emission levels can be achieved at its refinery. *See Indeck-Elwood, LLC*, 13 E.A.D. 126, 183 (EAB 2006) (“[T]he existence of a similar facility with a lower emissions limit creates an obligation” for the permit issuer “to

²² As a general matter, Tesoro's BACT analysis is characterized by assertions for which there is little or no documentation. In particular, the company's cost estimates, which are significantly out of line with those in the MARAMA document, IR001328, lack supporting evidence.

consider and document whether that same emission level can be achieved at [the] proposed facility.”).

Indeed, were Tesoro’s selection of its existing technology as BACT defensible, the relevant BACT inquiry would not end there. After all, Tesoro would still have to establish an emission limit that is reflective of the emission reduction capabilities of its existing technology. *See, Sierra Club*, ¶ 48 (holding “that it was unreasonable for the agency to adopt the 0.1 twenty-four hour emission limitation when there was evidence that a lower overall emission limitation was achievable” for the same control technology). This Tesoro has not done. Merely falling back on existing emission limitations is not equivalent to adopting an emission limitation based on the maximum emission reductions achievable by the particular control technology.

This is especially true here, where the record shows that Tesoro’s existing emission limitations have **no** correlation to BACT and are not even “consistent” with BACT for the FCCU. Rather, the record confirms that the pre-2006 FCCU emission limitations were explicitly derived from adding baseline emissions to a number of tons per year just under the significance threshold. IR002840; IR001183-84; IR000292. Therefore, in 2012, Tesoro had no basis from which to argue that current operations and emission limits on the FCCU had any connection to BACT. Actually, the emission limits that were reconfirmed as BACT in 2012 were not reflective of BACT at all, but were artificially constructed as the result of simple addition. For this reason alone, that the emission limits ultimately imposed on the FCCU as BACT have no connection to any control technology and certainly are not representative of the maximum achievable

emission reductions, the Director's BACT analysis must be deemed unreasonable. The Director's reuse of pre-2006 emission limitations to control the FCCU that were derived, not from BACT, but from adding sub-major modification thresholds to baseline emissions, is not defensible.

Likewise, Tesoro's BACT for CO emissions from the FCCU cannot be sustained. The company states without analysis or evidence that compliance with the existing, pre-2006 emission limitation "satisfies BACT for the FCCU." IR002492; 40 C.F.R. § 60.100a(b)(4). Initially, such assertions do not meet the requirements of the BACT rule or constitute an adequate BACT inquiry. *See* Utah Admin. Code r.307-401-2(1). Moreover, EPA has explicitly rejected the perfunctory adoption of NSPS, which reflect "best demonstrated technology" as BACT, stating that an "NSPS simply defines the minimal level of control to be considered in the BACT analysis." NSR Manual, B.12. Therefore, the NSPS merely offers a place to start with a BACT analysis and by definition cannot be assumed to be a substitute for the maximum achievable emission reductions.

Thus, Tesoro's July 25, 2012 "analysis" does not succeed as a justification for Tesoro's adoption of its pre-2006 emission limitations as BACT in 2012. It does not consider or document the relevant BACT factors and does not lead to the lowest achievable emission limitations. Most importantly, the very emission limitations the company claims are reflective of BACT – or that must be reflective of BACT if the Director's decision is to be upheld – actually had no connection to BACT in 2006 and have even less connection to BACT today.

II. The Director's Application of BACT to the SRU, DDU and VRU is Neither Legally Sufficient Nor Supported by the Record.

A. The SRU.

Prior to the close of the comment period, the Director took the position that he was required to apply BACT to the SRU. His resulting contention that a TGTU was the best available control technology applicable to the unit was therefore subject to public review. IR000668, IR002751, IR000321. Initially, this mere assertion – without any analysis, documentation or explanation – did not meet the requirements of Utah's BACT rule. *See Sierra Club*, ¶¶ 4; 4, fn. 2 & 47-48; Utah Admin. Code r.307-401-2(1). By simply insisting that the TGTU was BACT, the Director failed to demonstrate that the TGTU would achieve reductions that reflect the use of the best available control technology, as determined by examining the emission controls and limitations that similar sources employ. In addition to lacking any basis in the record, the Director's contention failed to establish an emission limit on the TGTU to ensure, among other things, that the unit would achieve reductions of SO₂ that reflect BACT.

Rather than undertake appropriate BACT analysis in response to comments requesting that he do so, the Director disavowed his previous position, claiming for the first time that the SRU is **not** subject to BACT. IR001982, IR001989. However, the Director's efforts to retract his prior statements fail. First, the record establishes that the SRU **will be** modified as a result of the Expansion.²³ IR000689 (“Physical changes will

²³ Alternatively, the Director's bare assertion that the unit will not be modified is insufficient to overcome his previous determination that the SRU is subject to BACT and that the unit would be modified as a result of the Expansion.

be made to the SRU affected facility as part of the Project, including installation of a TGTU.”); IR000341; IR000304 (“To accommodate the recycle gas from the TGTU, the existing undersized spare SRU air blower maybe upgraded.”); IR000343-44 (“New and replaced fugitive components in VOC service will be installed in...[the] SRU...[and]...will become part of the existing emission unit”); IR000340 (“The SRU/TGI will experience an increase in utilization as a result of the Project.”); IR000301; IR000279 (“The increase in throughput of lighter products from the FCCU and upgrades to the DDU could result in an increase in sulfur in the feed to the SRU.”); IR 001980; IR000325.²⁴

Second, the Director’s reliance on r.307-401-12 to argue that the SRU is exempt from BACT is misplaced. IR001982; IR001989. Under its own terms, the provision only applies to a “project [that] does not increase the potential to emit of any air contaminant or cause emissions of any new air contaminant[.]” Utah Admin. Code r.307-401-12(1)(a). As the Director emphasized, the installation of the TGTU is not a standalone project, but an integral part of the Expansion, which the record shows will result in an increase in emissions of air pollutants. *See* IR001978-79 (the “installation” of the TGTU “is considered part of the overall Waxy Crude Processing Project (and was included in the NOI for that project)”; IR001979 (“Tesoro shall install a TGTU (tail gas treatment unit) at the SRU as part of the Waxy Crude Processing Project.”).

²⁴ The Director does not argue that, prior to the installation of the TGTU, there will be no potential increases of emissions from the SRU as a result from the Expansion.

Third, there is nothing in the record to support the Director's apparent contention that the TGTU will **not** result in an increase in the potential to emit of any air contaminant. Indeed the record indicates that emission increases will occur as a result of the installation of the TGTU. IR000409 (TGTU potential emission calculations); IR000301 (emission increases from SRU and SRU flare); IR000279 (suggesting TGTU could increase emissions of H₂S). As a result, the installation of the TGTU does not qualify under r.307-401-12(1)(a),

Finally, it would be plainly unlawful to encourage a source to avoid BACT or the lowest achievable emission limitation merely by claiming that it is voluntarily reducing its emissions. Under the Director's reading of r.307-401-12, a source could readily circumvent BACT simply by voluntarily doing the minimum to reduce its emissions. *See Sierra Club*, ¶ 42 ("We are wary of the risk of applicants describing a project in such a limited manner that they are able to circumvent the goals of BACT[.]"). As such an approach would be contrary to the purposes of BACT, the Director's theory must be rejected as unsound.

Thus, the Director's BACT for the SRU is neither legally sufficient nor supported by the record. Moreover, the reasons he gives for reversing his position that the SRU is subject to BACT are unpersuasive and contrary to the record.

B. The DDU and ARU.

The Director's application of BACT to the DDU and VRU also lacks a foundation in the record and the rigor necessary to meet the legal requirements of r.307-401-8. The record prior to the close of the comment period included no BACT analysis for the DDU

and VRU, IR000688; IR000321-22, even though these were to be new emission units at the refinery. IR000336. After the close of the comment period, Tesoro undertook a four-line BACT “analysis” for the DDU and VRU for the first time. IR002476; IR001989 (same language in Response to Comments); IR002466 (same). However, this analysis includes no citation, documentation, explanation, calculation of emission reductions expected from the implementation of the work practice. Rather, Tesoro merely contends that “flares represent [BACT] for control of process vents during [startup shutdown and malfunction] SSM events. It is impractical to measure these emissions because they occur only during SSM events,” and therefore “venting to the flares serves as the work practice standards under BACT.”²⁵

Once again, as there is no evidence or documentation to substantiate this assertion of “impracticality,” it is not supported by the record. The BACT rule “allows substitution of numeric BACT limits only when ‘technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible.’” *Indeck-Elwood*, 13 E.A.D. 126, 127 (EAB 2006) (*citing* 40 C.F.R. 51.21(b)(12)); Utah Admin. Code r.307-401-2(1) (same). However, mere assertions of measurement difficulties are not sufficient to establish infeasibility. Therefore, EAB rejected the permit issuer’s claim that “it was not technically feasible for Indeck to comply with the numerical limits set as BACT during

²⁵ As evidenced above, the Tesoro post-comment period justification of its NOI BACT – which did not include any BACT for the DDU and VRU – cannot be attributed to the Director.

SSM of the CFB boilers,” where the Board “found no on-the-record determination of such infeasibility.” *Indeck-Elwood*, 13 E.A.D. at 176-177. More specifically, EAB concluded that any claim by the permit issuer “that difficulties in measuring emissions during SSM events is the reason it cannot impose numeric limitations” had to be supported by evidence in the record. *Id.*

What is more, EAB interpreted the BACT rule to require not only documentation of infeasibility, but also a comparison of “the emission reductions expected from the implementation of work practices and operational standards with those reductions that could be expected from the application of numeric limits, as contemplated by [BACT].” *Id.* at 176; *see also id.* (“We also read this provision as requiring the emissions reductions associated with non-numeric limitations to be equivalent to those emissions achieved by the application of BACT limits.” (citing 40 C.F.R. § 51.21(b)(12)).

Therefore just as the record must support the Director’s determination of BACT emission limitations, it must also document any determination of infeasibility and, at a minimum, assess expected emission reductions from BACT-based work practices. Utah Admin. Code r.307-401-2(1). Because the record is devoid of any such record evidence and the Director relies on mere assertion to claim “impracticality,” the substitution of work practices for numeric emission limitations is not reasonable.

CONCLUSION

Because the Director’s applications of BACT to the FCCU, SRU, DDU and VRU were not properly subject to public comment, are not supported by the record, are not legally sufficient, do not reflect the application of the best available control technology,

and do not adequately protect the NAAQS or impose on the emission units limitations that represent the maximum achievable reductions for each relevant air contaminant, Utah Physicians respectfully requests that the BACT decision be remanded to the agency and that the Director be required to undertake, with full public participation, a legally defensible BACT analysis and derive BACT-based emission limitations that are based on record, that evaluate the factors applicable to sound BACT determinations and that achieve the stated goals of mandating best available control technology.

Respectfully submitted this 20th day of July, 2015.



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CERTIFICATE OF SERVICE

I hereby certify that on July 20, 2015, I caused the above-entitled instrument to be emailed and served by first-class mail to the following persons:

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Certificate of Compliance With Rule 24(f)(1)

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1. This brief complies with the type-volume limitation of Utah R. App. P.24(f)(1) because this brief contains 13,962 words, excluding the parts of the brief exempted by Utah R. App. P.24(f)(1)(B).
2. This brief complies with the typeface requirements of Utah R. App. P.27(b) because this brief has been prepared in a proportionally spaced typeface using Microsoft Word using 13 point Times New Roman Font.

Dated this 20th day of July, 2015.



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