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**BEFORE THE EXECUTIVE DIRECTOR  
UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY**

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In the Matter of: Revolution Fuels, LLC Coal to Liquid Facility, Air Quality Approval Order (DAQE-AN154900001-16)	<b>REVOLUTION FUELS' RESPONSE TO PETITIONER'S OPENING BRIEF</b>  Administrative Law Judge Richard K. Rathbun  May 8, 2017
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Pursuant to Utah Code 19-1-301.5(8), Respondent Revolution Fuels, LLC ("Revolution Fuels") submits this Response to the Sierra Club's ("Petitioner") Opening Brief.

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## INTRODUCTION

Revolution Fuels intends to construct and operate a facility in Utah's Carbon County that converts nearby-mined coal into diesel and jet fuel, liquefied petroleum gas, and naphtha. As required by Utah's air quality laws, Revolution Fuels obtained an Approval Order ("AO") from the Utah Division of Air Quality ("DAQ") that authorized the construction of the coal-to-liquid facility and established production and emission limitations for the facility. [AR002476-88] These administrative proceedings are focused on two issues from this AO.

The first issue raised by Petitioner relates to the air emissions that will be generated when gases are sent to, and controlled by, a flare during malfunction events. During normal operations (i.e., operations that do not constitute startup, shutdown or malfunction), Revolution Fuels gasifies coal to produce syngas. [AR000011, 2381] Through a series of processes, the syngas is either refined into a liquid or is recycled back into the process as a fuel. [*Id.*] But during malfunction events, Revolution Fuels must otherwise process the syngas generated prior to the malfunction. Rather than venting the syngas directly into the atmosphere, Revolution Fuels plans to control the emissions by routing the syngas to a flare that combusts up to 98% of the volatile organic compounds (VOC) and trace amounts of hydrogen sulfide (H<sub>2</sub>S) contained in the syngas. [AR002338]. Petitioner argues that DAQ made three mistakes when the agency evaluated Revolution Fuels' use of the flare during malfunction events: DAQ exempted malfunction emissions from any regulation; DAQ did not include malfunction emissions in the calculation of Revolution Fuels' potential to emit ("PTE"); and DAQ was required to conduct an analysis of best available control technology ("BACT") for the malfunction emissions associated with the flare. Petitioners have not carried their burden on any of these claims as DAQ did not

exempt the malfunction emissions from regulation, DAQ properly interpreted what emissions must be included in the calculation of PTE, and DAQ correctly determined that BACT was not triggered for the malfunction emissions.

The second issue raised by Petitioner relates to the control of emissions from a coal storage pile. The pile is limited to a 0.04 acre site and will have, at most, 1.36 tons per year (“tpy”) of emissions. [AR002490, 2498, n.8] Petitioner argues that BACT for the coal storage pile was a complete enclosure of the storage pile. But Petitioner has not carried its burden of proof because DAQ imposed appropriate controls (that will limit emissions by 90%) and because DAQ imposed an emission limitation.

### **STANDARD OF REVIEW**

Revolution Fuels agrees with the analysis and application of the standard of review presented in the DAQ’s Response Brief. As such, Revolution Fuels adopts DAQ’s standard of review analysis as its own.

### **ARGUMENT**

#### **I. DAQ DID NOT EXEMPT MALFUNCTION EMISSIONS**

##### **A. Relevant Administrative Record and DAQ Analysis**

Response to Comment number 33 contains DAQ’s analysis of whether the agency exempted malfunction emissions associated with the flare from regulation. In part, the response states:

The flare is not intended to be operated on a continuous basis. Any operation, besides continuous pilot light, constitutes startup/shutdown operations or upset/breakdown/emergency operations. . . . Upset/Breakdown/Emergency operations are subject to R307-107-1 (Applicability and Timing), R307-107-2 (Reporting), and potentially R307-107-3 (Enforcement Discretion). These provisions *assume that malfunction emissions are violations of an applicable*

*approval order* but afford DAQ discretion regarding the imposition of fines and penalties.

...

Contrary to the commenter's contention that upset emissions are unlimited under the AO, if upset emissions occur in excess of Revolution Fuels' limits, such emissions may be excused if they satisfy the requirements of Utah's Unavoidable Breakdown Rule ("UBR"). See Utah Admin. Code R307-107. . . . The commenter's claim that proposed permit allows unlimited upset emissions is incorrect. *The limits in the proposed permit contemplate zero upset emissions from the flare.* Any exceedance of the permit limits, due to upset conditions or otherwise, is a violation of the permit.

[AR002435-36 (emphasis added)]<sup>1</sup>

The AO regulates the flare through following relevant provisions:

- II.B.4.a All exhaust gas/vapors from startup, shutdown and upsets shall be routed through the flare operating with a continuous pilot.
- II.B.1.g The owner/operator shall not exceed 4 start ups and 4 shutdowns on a rolling 12 month period.
- II.A.8 Flare: 1 MMBtu/hr continuous flare pilot.

[AR002480, 2482 & 2484]

**B. The AO does not Allow Any Emissions from the Flare during Malfunctions**

Rather than exempting the malfunction emissions associated with the flare, as Petitioner contends, the AO authorizes no emissions from the flare during malfunction events.<sup>2</sup> Under UDAQ's regulations, sources that will have emissions above certain levels (e.g., 5 tpy of SO<sub>2</sub>, CO, NO<sub>x</sub>, PM<sub>10</sub>, ozone, or VOC) are required to obtain an approval order prior to construction and operation of the facility. Utah Admin code R307-401-1; *see also id.* R307-401-9 (setting

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<sup>1</sup> The complete text of all comments quoted or cited in this Response are attached hereto as Exhibit 1.

<sup>2</sup> This issue presents a mixed question that should be reviewed under the clearly erroneous standard.

emission thresholds for sources that are exempt from the AO process). As a consequence, sources subject to the approval order process are prohibited from emitting air pollutants that are not first authorized by DAQ in an approval order. In other words, as a source that is subject to R307-401, Revolution Fuels is prohibited from releasing emissions that are not authorized by the AO.

The AO does not authorize Revolution Fuels to emit pollutants from the flare during malfunction events. The only emissions that DAQ authorized for Revolution Fuels' flare were emissions associated with the continuous pilot light and four startups and shutdowns on a rolling 12-month basis. As DAQ explained in Response to Comment number 33, any emissions from the flare during malfunctions would be a violation of the AO. Furthermore, DAQ determined that its rule governing breakdowns and equipment malfunctions, Utah Administrative Code R307-107, would govern in the event that Revolution Fuels suffered a malfunction that led to syngas being routed to the flare.

Petitioner identifies the definition of “breakdown” to argue that DAQ cannot rely upon R307-107. [Pet. Br., p. 10] Contrary to Petitioner’s argument, the definition supports DAQ’s interpretation. A breakdown is defined as a “malfunction . . . causing emissions in excess of those *allowed by approval order* or Title R307.” Utah Admin. Code R307-101-2 (emphasis added).<sup>3</sup> The AO allows no emissions from the flare during malfunctions. Moreover,

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<sup>3</sup> The federal courts and EPA have both recognized that equipment malfunctions are inevitable regardless of how well a source maintains and operates a facility. *E.g., United States Sugar Corp. v. EPA*, 830 F.3d 579, 606-607 (D.C. Cir. 2016) (“Both sides agree that malfunctions are inevitable. . . . In attempting to write rules to account for emissions, however, the EPA faced an intractable problem: how to account for a malfunction which is, by definition, unpredictable in terms of timing, duration, magnitude, and effect. While the existence of malfunction is entirely predictable, the nature of those malfunctions is not, and it is the malfunction’s nature that affects emissions and thus is relevant to the application of emission limits.”). Moreover, courts and EPA recognize that regulating malfunction emissions through enforcement discretion – which is how R307-107 operates – is appropriate. *Cf.*, 80 Fed. Reg.

Petitioner’s focus on the order from the Holly proceedings also misses the point. Like Holly, Revolution Fuels’ AO does not authorize any emissions from the flare during malfunctions.

## **II. DAQ CORRECTLY EXCLUDED MALFUNCTION EMISSIONS IN THE CALCULATION OF PTE**

### **A. Relevant Administrative Record and DAQ Analysis**

Revolution Fuels’ Notice of Intent (NOI) includes an engineering calculation of the coal-to-liquid’s facility potential to emit (“PTE”). [AR000049, *see also* AR002384 (June 6, 2016 SPR), AR002490 (final PTE calculations)] It is undisputed that malfunction emissions were not included in the estimate of PTE. In Response to Comment numbers 33 and 71, DAQ explained why the emissions associated with malfunctions were not included in Revolution Fuels’ PTE. [AR002434-2436, 2462-2466] In Response number 33, DAQ determined:

When calculating the PTE for flares for permitting purposes, the law does not require the inclusion of upset emissions because such upset emissions are not considered part of *normal operations*. *See Sierra Club v. Wyoming Dep’t of Env’tl. Quality*, 251 P.3d 310, 314 (Wyo. 2011) (holding that “hypothesizing the worst possible operation is the wrong way to calculate potential to emit . . . PTE includes only emissions that occur during normal operations” thus “cold start” emissions and “malfunctions” were properly excluded from the plant’s PTE); *see also United States v. Louisiana-Pacific Corp.*, 682 F. Supp. 1141, 1158 (D. Colo. 1988). Accordingly, malfunction emissions were not included in the PTE calculations for the flare, which instead is based on the “average non-upset throughput to [the] flare” and appropriate emission factors. *See Holly Order* at 45.

[AR002435 (emphasis added)]. In Response Number 71, DAQ explained:

DAQ requires sources to estimate potential to emit emissions *based upon normal operations*. Where startup/shutdown emissions can be reasonably estimated they are included in the sourcewide PTE.

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33840, 33844/1 (June 12, 2015) (“SIPs may include criteria and procedures for the use of enforcement discretion.”); *U.S. Sugar Corp.*, 830 F.3d at 608 (“At the very least, [the CAA] permits the EPA to ignore malfunctions in its standard-setting and account for them instead through its regulatory discretion.”).

*Id.* 830 F.3d at 607

. . .

The flare will be used during upset/breakdown/emergency situations and purging during startups and shutdowns. Upset/Breakdown/Emergency situations **are not quantifiable from a permitting standpoint, and not classified as normal operations** and shall be covered under R307-107.

. . . [T]he commenter relies on the Riva Memo, an EPA document that the commenter argues requires that malfunction emissions be included in PTE calculations. . . . In this memo, EPA states that it has no policy that requires exclusion of emergency or malfunction emissions. Despite having no policy, EPA (without citing any authority) then states that “to determine PTE, a source must estimate its emissions based on worst-case scenario taking into account startups, shutdowns, and malfunctions.” ***If not on policy grounds, it is unclear what authority EPA based this statement, as it does not cite the CAA, applicable statutes or regulations, cases, or any administrative decisions.*** As such, EPA seems to base its answer on undocumented discussions with OAQPS and OECA.

. . . “[I]n practical terms, for any source upset conditions are always unknown, and can only ever be an estimate. Relying as it is on nothing more than internal discussions and not characterizing itself as a policy pronouncement, the Riva Memo ***carries little weight*** and does not overcome DAQ’s stated decision that malfunction emissions, being unpredictable and thus unable to be estimated, are not included in PTE.

[AR002462-2463 (emphasis added)]

**B. There is No Legal Requirement that DAQ include Unauthorized Malfunction Emissions in the Calculation of PTE**

Petitioner argues that DAQ was under a binding, legal mandate to include malfunction emissions associated with the flare in the calculation of Revolution Fuels’ PTE.<sup>4</sup> [Pet. Br., pp. 3-9] While the calculation of a facility’s PTE is a fundamental component of DAQ’s preconstruction permitting program, there simply is no legal mandate that required DAQ to calculate Revolution Fuels’ PTE in this manner.

DAQ’s regulations define PTE as,

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<sup>4</sup> This claim presents a legal question that should be reviewed under the clearly erroneous standard.



the *maximum capacity* of a stationary source to emit an air pollutant *under its physical or operational design*. Any *physical or operational limitations* on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is enforceable.

Utah Admin. Code R307-401-2 (emphasis added).<sup>5</sup> Courts have explained that this definition requires PTE to be calculated as the maximum capacity of the facility as it is intended to be normally operated. *E.g., Sierra Club v. Wyo. Dept. of Env'tl. Quality*, 251 P.3d 310, 313 (Wyo. 2011) (“PTE is meant to represent the maximum emission that can be generated while operating a source as it is intended to be operated and as it is normally operated.” (emphasis added and internal quotation marks omitted) (hereinafter “Wyo. DEQ”)). Indeed, a federal district has held,

[P]otential to emit does not refer to the maximum emissions that can be generated by a source hypothesizing the worst conceivable operation. Rather, the concept contemplates the maximum emissions that can be generated while operating the source *as it is intended to be operated and as it is normally operated*. Of course, it is *possible* that a source *could* be operated without the control equipment designed into it . . . . Yet, *Alabama Power* stands for the proposition that hypothesizing the worst possible emissions from the worst possible operation is the wrong way to calculate potential to emit.

*Louisiana-Pacific Corp.*, 682 F.Supp. at 1158.

In line with this caselaw, DAQ determined that Revolution Fuels’ PTE would not include malfunction emissions associated with the flare because the coal-to-liquid facility was designed to operate with various controls on particular emission units and the use of the flare was an

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<sup>5</sup> EPA defined PTE identically. *E.g.*, 40 CFR 52.21(b)(4). The definition of PTE evolved following the decision in *Alabama Power Co. v. Costle*, 636 F.2d 323 (D.C. Cir. 1979), as EPA initially attempted to define PTE as emissions that would result from a source operating a full capacity without any air pollution controls. *U.S. v. Louisiana-Pacific Corp.*, 682 F.Supp. 1141, 1157-58 (D. Colo. 1988). The court, however, rejected EPA’s view and held that PTE must be based on a facility’s “design capacity” and that pollution controls “must be considered in the calculation” of PTE. *Id.* at 1158. The current version of the definition of PTE is the result of the *Alabama Power* decision, which recognizes that sources must be afforded the benefit of any physical and operational limitations when they calculate PTE.

exception to normal operations. This calculation represents the maximum capacity of the facility under its operational design. Utah Admin. Code R307-401-2; *Wyo. DEQ*, 251 P.3d at 313. The facility is intended to operate with the control equipment identified and required by the AO. For example, the natural gas burner system associated with the pyrolysis and gasification processes will be controlled by Selective Catalytic Reduction (“SCR”). The SCR will reduce NOx emissions, among other pollutants, from 85.47 tpy to 15.41 tpy (a reduction of more than 80 percent of the potential emissions from the gasification process). [AR002490] The definition of PTE directs DAQ to treat the addition of the SCR as a limitation on the facility’s physical or operational design.

Yet Petitioner argues that EPA policy shows DAQ misinterpreted what the definition of PTE covers. [Pet. Br., p. 5] The only policy that Petitioner identified as undermining DAQ’s interpretation was a letter authored by Stephen C. Riva, the permitting chief of EPA Region 2 to New Jersey regulators, referred to as the “Riva Letter” in this brief. [AR002139-40, attached hereto as Exhibit 2] However, the Riva Letter does not stand for the proposition that Petitioner argues, and DAQ’s regulation of Revolution Fuels’ flare is, in fact, consistent with the Riva Letter.

The Riva Letter, in context, addresses the need to account for expected, normal emissions associated with the operation of an emergency or backup generator. Specifically, whether there needs to be some accounting for the expected number of hours of operation (and hence emissions) associated with the use of emergency generators. The Riva Letter concludes that when determining the PTE of emergency generators, the estimate should include “some amount of operation sufficiently large to cover emergencies (i.e., 500 hours a year).” This approach is

exactly consistent with what UDAQ did for the emergency generator permitted in Revolution Fuels' AO. Revolution Fuels will install an emergency generator, and, as such, DAQ accounted for 500 hours of generator operations in the calculation of Revolution Fuels' PTE. [AR000015, 0111-12, 2490, 2493]

This is very different than the proposition that Petitioners try to assert by selecting limited, out of context, statements made in the letter. The Riva Letter was not offering guidance on the broader question of accounting for malfunction emissions. (EPA's views on this are conflicting with what is being suggested by Petitioners and are addressed elsewhere in this brief.) Including an accounting of the normal emissions from an emergency generator based on an estimated number of hours of operation is akin to accounting for the expected emissions from the flare's pilot light, both are reasonably amenable to being estimated. What the Riva Letter does not instruct is that regulators must account for malfunction emission, associated with other emission units, that are routed to, and combusted by, Revolution Fuels' flare. See *Wyo. DEQ*, 251 P.3d at 314-15 (interpreting the Riva Letter as requiring emissions to be included in PTE "if they fit within the regulatory definition, or excluding them if they do not").

Even if the Petitioner's reading was a fair reading of the Riva Letter, the Riva Letter is an opinion letter, which "lack[s] the force of law" and is entitled to respect "only to the extent that [its] interpretations have the power to persuade." *Christensen v. Harris County*, 529 U.S. 576, 587 (2000). As DAQ explained, the letter has little persuasive power because it does not identify any statutes, regulations, cases, administrative decisions, or official policy that it rests on. Moreover, the Riva Letter does not set out EPA's policy; the letter provides an interpretation

form a single regional employee (EPA has divided its offices into ten regional offices; EPA's Region 8 office has oversight over Utah's air program).<sup>6</sup>

### **III. BACT WAS NOT REQUIRED FOR THE MALFUNCTION EMISSIONS ROUTED TO THE FLARE**

#### **A. Relevant Administrative Record and DAQ's Analysis**

The NOI provided details on the size of the flare, described what equipment would be connected to the flare, described how the flare would be used, and calculated the emissions that would result from the flare's pilot light. [AR000015, 16, 49] Following submission of public comments, Revolution Fuels and DAQ agreed that Revolution Fuels would submit additional details on the flare. [AR002336, 2338] Revolution Fuels submitted the additional information on March 16, 2016. [AR002340-2349]

Response to Comment number 32 contains DAQ's analysis of whether BACT was required for the flare. [AR002432-2434] That response states:

The commenter argues that the Director failed to meet this obligation because the proposed flare is a source of air pollution. DAQ disagrees with this characterization because the flare is *installed as control technology to combust nitrogen purge gas and syngas*. The flare is used *as pollution control and safety equipment* for the gasification process, Fischer-Tropsch Unit, and hydro processing operation during startups and shutdowns.

The only emissions associated with the flare during *normal non-upset conditions are the emissions from the pilot light*. The flare pilot light's emissions during such normal operation are miniscule, with a PTE of 0.21 tpy of NO<sub>x</sub> and 0.36 tpy of CO. Historically, *BACT for emissions of this level is no additional pollution control equipment, but a requirement of proper maintenance and operation using natural gas*. This BACT is imposed in AO conditions II.B.4 and II.B.1.b(A) of the permit, requiring *no visible emissions from the flare*.

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<sup>6</sup> The only other authority that Petitioner identifies is a list of applications that quantified malfunction emissions as part of the source's PTE. The simple fact that an application included such calculations does not affirmatively establish DAQ was required by law to include malfunction emissions associated with Revolution Fuels' flare.

Despite arguing that the flare itself is subject to BACT, the commenter provides no example of a control technology that could be applied to a flare operating during upset conditions, where the flare itself is already a control device for that exact purpose.<sup>7</sup>

[AR002433] DAQ further explained that the AO would limit Revolution Fuels' to four startups and shutdowns on a rolling 12-month basis and added the emissions from those four events to the calculation of the facility's PTE. [AR002462, 2482 (Condition II.B.1.g)] DAQ concluded:

[A]ll emissions associated with the pilot light during normal operations are subject to BACT, as explained above. All emissions associated with the flare during startup and shutdown are accounted for in the PTE and limited to four each per year. All emissions associated with upset conditions will be addressed by DAQ under the Breakdown Rule R307-107.

[AR002434].

Furthermore, in Response to Comment number 33, DAQ explained why Subpart Ja (an NSPS regulating petroleum refineries) did not apply to Revolution Fuels and further explained why the flare was considered a pollution control.

Refinery flares are subject to separate federal regulations. *See* 40 CFR § 60.101a. This source is not classified as a refinery, as per Section 60.101a. . . .

The proposed flare will provide 98% destruction of gases during startup, shutdown and upset/breakdown/emergency. Without the flare, the gases during startups, shutdowns and upset/breakdown/emergency would be vented directly into the atmosphere. The only emissions to be considered in the flare's normal operation are the emissions from the pilot light. The pilot light is a small flame fired on natural gas to combust any gases during an[] emergency, startup, and shutdown situations.

[AR002435]

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<sup>7</sup> The nitrogen purge gas that is controlled by the flare is not at issue in these proceedings because that gas is only produced during facility startup and shutdown. [AR002338, 2345-2346, 2462]

**B. The Flare’s Malfunction Emissions are not Subject to BACT**

Petitioner argues that the malfunction emissions associated with the flare are subject to BACT because the flare is “a source of air pollution.”<sup>8</sup> The only authority that Petitioner cites to prove their claim is the portion of the definition of BACT that states BACT is “an emission limitation” and DAQ’s corresponding definition of an “emission limitation.” [Pet. Br. p. 14] These citations, however, do not identify any law that dictates when BACT must be performed; neither definition explains when BACT is triggered for a particular unit or piece of equipment. Rather than finding a basis for their claim that the malfunction emissions associated with the flare triggered BACT, Petitioner ignores that the flare will be installed solely to control emissions from gases produced elsewhere at the facility, and presumes that BACT must be triggered because some emissions are conveyed through the flare.

Utah’s regulatory system rejects Petitioner’s reading. BACT applies to “any proposed stationary source.” Utah Admin. Code R307-401-2 (defining BACT). A “stationary source” is defined as “any building, structure, facility, or installation which emits or may emit an air pollutant.” *Id.* The regulation goes on to define “building, structure, facility, or installation” as “*all of the pollutant-emitting activities*” associated with the facility. *Id.* (emphasis added). Pollutant-emitting activities are the linchpin to the question Petitioner raised. It is the pollutant-emitting activities that trigger BACT for a unit or piece of equipment. Control equipment does not qualify as pollutant-emitting activities and DAQ correctly determined that malfunction emissions associated with Revolution Fuels’ flare, which is a control, did not trigger BACT.

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<sup>8</sup> This claim presents a mixed question that should be reviewed under the clearly erroneous standard.

The problem with Petitioner’s reading of the applicable regulations is illustrated through an example of another unit evaluated as part of the Revolution Fuels’ AO. DAQ determined that Selective Catalytic Reduction (“SCR”) would be BACT for the facility’s gasification burners. [AR002385-86]. The SCR will reduce NOx emissions by 70.06 tpy but will still result in 15.41 tpy of NOx emissions from the gasification burners. [AR002490]. The gasification burners are the pollution-emitting activity and the SCR is a control imposed as BACT for that activity. But under Petitioner’s articulation of the law, even though the SCR did not generate the emissions, the SCR would be subject to BACT because 15.41 tpy of NOx emissions will pass through the SCR. Such an interpretation results in a nonsensical expansion of the scope of BACT as it would require controls upon the controls selected as BACT.

The same holds true for the flare. The flare is a control installed to limit Revolution Fuels’ emissions during malfunction events (as well as during startup and shutdown). It is no more of a pollution-emitting activity during malfunction events than the SCR is during normal operations.

The only other authority that Petitioner cites are three Environmental Appeals Board (“EAB”) decisions. Petitioner’s citations are oblique as Petitioner fails to draw anything of substance from these decisions. [Pet. Br. p. 17 (arguing DAQ’s treatment of the flare is erroneous “for similar reasons” as found by the EAB)] Revolution Fuels does not believe this is adequate briefing, *Wintle-Butts v. Career Serv. Review Office*, 2013 UT App 187, ¶ 20, 307 P.3d 665, but, nonetheless attempts to respond to this assertion.<sup>9</sup> In all three decisions – *In re Steel*

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<sup>9</sup> Because Petitioner directs the reader to its Pre-Hearing Brief on the Standard of Review for further clarification, Revolution Fuels is left to assume that Petitioner is directing the Respondents and the ALJ to the pin cites identified in that brief.

*Dynamics, Inc.*, 9 E.A.D. 165, 206-207, 2000 WL 833062, \*29 (June 22, 2000), *In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 1999 WL 64235, \*15 (February 4, 1999), and *In re Masonite Corp.*, 5 E.A.D. 551, 566, 1994 WL 615380, \*9 (November 1, 1994) – the EAB found that state regulators’ selection (or elimination) of controls and emission limitations as BACT were insufficient. These decisions are inapplicable to this claim because the administrative decisions do not address when BACT is triggered.

#### **IV. DAQ DID NOT ERR IN EVALUATING THE COAL STORAGE PILE**

##### **A. Relevant Administrative Record and DAQ’s Analysis**

Coal will be delivered to Revolution Fuels via 44-ton belly dump trucks, which will unload directly into a hopper and radial stacker. [AR002381] The radial stacker will transport the unloaded coal to a temporary coal storage pile that is limited to a 0.04 acre site. [*Id.*, AR002498] Due to its nature and size, emissions from the pile will be 1.36 tpy of PM<sub>10</sub>. [AR002490-91]

In the NOI, Revolution Fuels conducted a BACT analysis for the coal storage pile and proposed that DAQ determine that water sprays and the inherent moisture of the coal be imposed as BACT. [AR000113-114] Revolution Fuels’ analysis identified authority (namely the Western Regional Air Partnership’s Fugitive Dust Handbook) that determined water sprays would reduce emissions from the pile by 90%. Revolution Fuels also recognized that 40 CFR Part 60, Subpart Y was an applicable NSPS and proposed it comply with that regulation as part of its BACT requirements. Subpart Y does not require the implementation of any specific controls or an emission limitation for coal storage piles. Rather, Subpart Y requires operators of



open coal storage piles to develop a fugitive coal dust control plan that selects from a list of possible control measures. 40 CFR § 60.254(c).

Revolution Fuels also considered whether covering the coal storage pile would be BACT:

Enclosure or covering of inactive piles to reduce wind erosion can also reduce emissions. Although enclosing storage piles can be an effective means to reduce wind erosion emissions enclosing stockpiles that are actively used is not economically feasible.

[AR000113].

In the Source Plan Review, DAQ agreed with Revolution Fuels' BACT analysis and found that water sprays (which could reduce emissions by 90%), the inherent moisture content of the coal, and Subpart Y would represent BACT for the coal storage pile. [AR000343-344 (Dec. 7, 2015 SPR); AR002387-2388 (June 20, 2016 SPR)] The agency also determined that "enclosing stockpiles that are actively used is not feasible." [*Id.*] DAQ also imposed a 20% opacity limit as a BACT emission limitation for the coal storage pile. [*Id.*, *see also* AR002481 (condition II.B.1.b.)]

DAQ authored a number of Responses to Comment that address the issues Petitioner raises. As to the economic analysis related to complete enclosure of the coal storage pile, DAQ stated,

***Totally enclosing*** the storage piles for controlling fugitive PM10 emissions ***is not always feasible***. . . . The BACT analysis submitted to DAQ per UAC R307-401 in Appendix G 6.2 of the NOI determined that the cost associated of controlling 1.38 [sic] tpy of PM10 by enclosing the coal storage piles ***is economically infeasible***. The commenter does not address this determination.

[AR002457]. On the issue of DAQ's determination to impose Subpart Y as part of the BACT-level controls, DAQ discussed the requirements of Subpart Y and stated that Revolution Fuels was required to meet the requirements of that NSPS. [AR002456]. DAQ also outlined all of the

controls that were imposed as BACT: “DAQ determined that BACT for the coal storage pile to be water sprays and conducting operations in compliance with the fugitive coal dust emission control plan as required by Section 60.254(c) [i.e., Subpart Y] and an opacity limitation of 20%. [AR002454].

DAQ also determined that it was not required to impose the standards set out in two rules Petitioner cited in their comments from the California South Coast Air Quality Management District.

DAQ acknowledges rules from other states, as they can serve as possible control technologies to be evaluated for a particular proposal that the DAQ is reviewing. However, the commenter has not identified and DAQ is not aware of any Utah state or federal rule that requires the DAQ to consider a rule from another state as BACT for a minor source in Utah. The rules cited by the commenter are only applicable in the South Coast Air Quality Management District in California but are not applicable in Utah.

[*Id.*] Finally, on the issue of whether DAQ was obligated to require Revolution Fuels to draft the fugitive dust control plan that is contemplated by Subpart Y as part of the NOI/AO process, DAQ stated, “The Director is relying on 40 CFR § 60.254 as BACT for coal storage piles. The fugitive dust control plan is required to meet the requirements of 40 CFR Pt. 60, Subpart Y.” [AR002458]

**B. DAQ's BACT Determination for the Coal Storage Pile is Not Clearly Erroneous**

**1. For such limited emissions, it was not clearly erroneous for DAQ to determine it was not feasible to completely enclose the coal storage pile**

At most the 0.04-acre coal storage pile would be the source of 1.36 tpy of PM<sub>10</sub> emissions.<sup>10</sup> The controls selected as BACT – i.e., water sprays – would control 90% of those emissions, meaning the coal storage pile would be the source of 0.136 tpy of uncontrolled emissions. Petitioner's argument presumes that enclosure of the coal storage pile would result in greater emission reductions. But there is nothing in the administrative record or in Petitioner's Opening Brief that supports this presumption. Consequently, Petitioner has failed to show that the controls imposed in the AO are not BACT.

But even if there were some evidence supporting Petitioner's assertion, DAQ's conclusion that providing additional controls was not economically feasible is sound. DAQ's determination is based on a conclusion that it is facially clear that the cost of controlling an additional 0.136 tpy of PM<sub>10</sub> by constructing a structure and installing pollution controls (such as fabric filters) was not economically feasible. In other words, it is readily apparent that the cost of constructing a structure and installing pollution controls would not be economically feasible given that the additional requirements would, at the very most, control 0.136 tpy of emissions.<sup>11</sup>

EPA reached a nearly identical determination when it developed Subpart Y.

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<sup>10</sup> All three claims related to the coal storage pile present mixed questions that should be reviewed under the clearly erroneous standard.

<sup>11</sup> Emissions of 0.136 tpy are minor emissions. Utah Admin. Code R307-401-9 (exempting small stationary sources from the AO process when their PM<sub>10</sub> emissions are less than 5 tpy). Furthermore, DAQ's analysis of the emissions attributable to the flare's pilot light provide some context to how minimal the uncontrolled emissions from the coal storage pile are. For the pilot light, DAQ explained that the 0.21 tpy of NO<sub>x</sub> and 0.36 tpy of CO are "miniscule," and that BACT for such levels of emissions is "no additional pollution control equipment" but rather a requirement for proper maintenance of the pilot light. [AR002433]

EPA continues to believe that the *cost* of requiring open coal storage piles to be enclosed is unreasonable and thus has not determined that complete enclosure with fabric filters constitutes adequately demonstrated control technologies for open storage piles at this time.

EPA, Standards of Performance for Coal Preparation and Processing Plans, Response to Comments Received on Proposed Amendments, , Section 3.4.6.2.2 – Enclosure of Coal Storage Piles , September 2009 (emphasis added) (excerpt attached hereto as Exhibit 3).

## **2. DAQ did not limit BACT to Subpart Y**

Petitioner argues that DAQ erred by relying exclusively on Subpart Y to represent BACT for the pile. This is not the case. DAQ evaluated three potential controls – i.e., water sprays/surfactant, inherent moisture, and enclosure – for the coal storage pile and determined whether an NSPS applied to the source. [AR002387-88] Ultimately, DAQ determined that water sprays *and* NSPS Subpart Y would represent BACT for the coal storage pile and imposed an emissions limitation of 20% opacity. [AR002454]<sup>12</sup>

Moreover, DAQ’s use of Subpart Y lines up precisely with how DAQ’s regulations anticipate the use of an applicable New Source Performance Standard (“NSPS”) in a BACT analysis. The definition of BACT includes the following provision: “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 or 61.” Utah Admin. Code R307-401-2. This language dictates that DAQ apply an applicable NSPS – Subpart Y is an NSPS enacted under Part 60 – as the minimum standard. *See* EPA, New Source Review Workshop

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<sup>12</sup> Subpart Y requires an owner of an “open storage pile” to develop a site-specific “fugitive coal dust emissions control plan.” 40 CFR 60.254(c). Subpart Y does not specify precise controls that will be applied. Rather, Subpart Y provides a list of control options, including water sprays that the owner may select. *Id.* § 60.254(c)(2). But DAQ did not leave the issue for Revolution Fuels to decide in a later-prepared fugitive coal dust control plan. DAQ determined that Revolution Fuels will install water sprays on the coal storage pile.

Manual, B.12 (“[T]he only reason for comparing control options to an NSPS is to determine whether the control option would result in an emissions level less stringent than the NSPS.”). DAQ imposed Subpart Y as a minimum standard.

In a somewhat related argument, Petitioner also argues that DAQ erred because the agency “completely ignore[d]” the California rules that Petitioner identified in its comments. [Pet. Br., pp. 18-19] DAQ neither ignored the comment nor the rules Petitioner identified. DAQ stated that it was unaware of any legal requirement that obligated it to impose another state’s regulation as BACT for a source in Utah. The only legal authority that Petitioner identifies in their brief as supporting their position that the California rules must be imposed as BACT is the definition of BACT and argues that the definition is the same for major and minor sources.

BACT is a “case-by-case” determination. Utah Admin. Code R307-401-2. Moreover, BACT is a review of controls installed at similar sources. EPA, NSR Workshop Manual, B.5; *see also* Pet. Br., p. 19 (arguing that BACT is based on “technologies that have been applied to other sources”). In contrast, the rules Petitioner cites establish general rules enacted as policy choices that apply universally regardless of technical feasibility, cost, or environmental or energy impacts. That is why – not the distinction between major and minor sources – DAQ did not adopt the SCAQMD’s rules as representing BACT.<sup>13</sup>

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<sup>13</sup> Petitioner’s reliance on the South Coast Air Quality Management District’s Rule 1158 is misplaced as the rule would not require enclosure of Revolution Fuels’ coal storage pile. The rule provides an exemption to the enclosure requirements where the pile is comprised of “moist material.” Rule 1158(k)(8) (“The provisions of paragraph (d)(2) shall not apply to moist material.”) [AR002204-19 (providing the text of Rule 1158)]; *see also* [AR00454 (Pet. comments identifying paragraph (d)(2) as requiring complete enclosure)]. The rule defines “moist material” as coal with a 7.6% moisture content. Rule 1158(c)(21) [AR002206]. The coal used by Revolution Fuels will have a moisture content of approximately 10%. [AR000011; 0337; & 2381]

**3. DAQ did not abuse its discretion when it found that the FCDCP was BACT**

Petitioner argues that DAQ erred when it issued a BACT determination that found Subpart Y was BACT for the coal storage pile but did not review the corresponding fugitive coal dust control plan or make it available for public comment. Petitioner again fails to acknowledge that DAQ imposed BACT that was in addition to Subpart Y. By mandating that Revolution Fuels control emissions from the coal storage pile with water sprays and limit emissions to 20% opacity, DAQ did not rest exclusively on a fugitive coal dust control plan as BACT. Rather, DAQ determined what constituted BACT – water sprays and a corresponding opacity standard, and required Revolution Fuels to comply with the applicable Subpart Y. In this way, the FCDCP merely supplements the BACT determination and ensures that the emissions from the coal storage pile “do not exceed” what is allowed by Subpart Y. Utah Admin. Code R307-401-2; *In re: Power Holdings of Ill., LLC*, 14 E.A.D. 723, 2010 WL 3258141, \*8 (EAB Aug. 13, 2010).

**CONCLUSION**

DAQ’s analysis and regulation of the Revolution Fuels’ facility does not suffer from any errors. DAQ properly regulated the emissions associated with Revolution Fuels’ flare by prohibiting any emissions during malfunctions, by appropriately excluding those same emissions from the calculation of the coal-to-liquids facility’s PTE, and by rejecting Petitioner’s BACT arguments related to the flare. DAQ’s review and determinations for the coal storage pile are equally free of errors as DAQ had sufficient basis to determine that enclosing the pile was not economically feasible, that Subpart Y was not the only control imposed as BACT, and that the fugitive coal dust control plan should be developed prior to operation of the facility.

Given these determinations, Revolution Fuels requests that the ALJ recommend the dismissal of Petitioner's Petition for Review.

DATED May 8, 2017.

/s/ Jacob A. Santini

Michael A. Zody

Jacob A. Santini

PARSONS BEHLE & LATIMER

*Attorneys for Revolution Fuels, LLC*

**CERTIFICATE OF SERVICE**

I hereby certify that on this 8<sup>th</sup> day of May, 2016, a true and correct copy of the forgoing **REVOLUTION FUELS' RESPONSE TO PETITIONER'S OPENING BRIEF** was filed via e-mail with the following:

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# Exhibit No. 1



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*Governor*

SPENCER J. COX  
*Lieutenant Governor*

Department of  
Environmental Quality

Alan Matheson  
*Executive Director*

DIVISION OF AIR QUALITY  
Bryce C. Bird  
*Director*

DAQE-MN15490001A-16

**MEMORANDUM**

To: Revolution Fuels, LLC Source File (Source ID 15490)

Through: Marty Gray, New Source Review (NSR) Section Manager, DAQ

From: Tad Anderson, Engineer, NSR Section, DAQ

Date: June 21, 2016

Subject: Response to Public Comments

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The Utah Division of Air Quality (DAQ) proposed an Approval Order (AO) for Revolution Fuels, LLC (Revolution Fuels), with a public comment period running from November 23 thru December 26, 2015. The DAQ extended the public comment period through January 11, 2016 in response to a requested hearing held in wellington on January 6, 2016. The hearing began at 6:00 P.M. on January 6, 2016 in the Wellington Elementary School, located at 250 West 200 North, Wellington, Utah.

The comments received, both written and those made orally at the hearing, are identified below along with the Division of Air Quality's (DAQ's) response to the comment. As required by R307-401-7(3), each comment received was considered and evaluated before final issuance of the AO.

**Oral Comments**

Over two hundred people attended the hearing, including DAQ staff (an attendance list is attached to this memo). Thirty-eight (38) people provided oral comment on the permit. All negative oral comments also submitted written comments which are included in the written response to comments.

No changes were made to the AO as a result of this comment.

## **Flare**

### **Comment 31: Environmental Coalition**

Page 2, ¶ 2

*“By completely ignoring the potentially significant emissions from flaring, the Director fails to demonstrate that the project will not interfere with air quality standards, particularly short-term NAAQS such as the one-hour SO<sub>2</sub> and NO<sub>x</sub> standards, the 8-hour ozone standard and the 24-hour PM<sub>10</sub> and PM<sub>2.5</sub> standards. The Director also failed to consider any available control technologies for the flare.”*

Exhibit A, Technical Comments, Page 2, ¶ 2, Megan Williams (footnote omitted)

*“The emissions inventory only includes emissions from the flare’s continuous pilot flame. Given that the Emissions Impact Analysis shows total modeled 1-hour average NO<sub>2</sub> concentrations are nearly 80% of the NAAQS, use of the flare – i.e., during startup, shutdown or upset conditions, as specified in the NOI – could result in hourly concentrations that exceed the short-term NAAQS. The DAQ must consider a more representative assessment of impacts from flare usage.”*

#### **DAQ Response:**

DAQ has not ignored the flare emissions. As per proposed condition II.B.4.a., “All exhaust gas/vapors from startup, shutdown and upset conditions shall be routed to the flare operating with a continuous pilot.” The continuous pilot is the only contribution to emissions associated with the flare while in normal operation. DAQ will address all emissions from upset conditions under R307-107-General Requirements: Breakdown. Startup and shutdown emissions operations have been limited to four per year (each) and the emissions associated with the startup and shutdown have been included into the emissions total in the Abstract of the ITA and the Source Plan Review on pages 2 and 6 “Summary of Emissions Total”. Normal operations of the plant also include the emissions from the four operational startups/shutdowns. With respect to whether the use of the flare will affect the short-term NAAQS, the additional four operational startup/shutdown emissions did not affect the impact analysis for NO<sub>x</sub> as per R307-410-4, Modeling of Criteria Pollutant Impacts in Attainment Areas. SO<sub>x</sub> was not analyzed since the expected concentration of sulfur in the feed gas going to the flare is nonexistent in a nitrogen purge gas.

A condition has been added to the permit to restrict the number of startups and shutdowns.

### **Comment 32: Environmental Coalition**

Page 14, ¶ 4 (footnotes omitted)

*“... the Director does admit that the use of the proposed flare will be a source of air pollution. Therefore, the Director must derive and impose a BACT emission limitation or standard on the flare. Alternatively, only with a demonstration of infeasibility, the Director may impose a ‘design, equipment, work practice, operational standard or combination thereof’ on the flare.”*

*In contrast to his duties under R307-401-8(1)(a) and 8(5) obligations, the Director undertook no BACT analysis of any sort in connection with the flare. Therefore, for this reason alone, the proposed AO is legally insufficient.”*

Exhibit A, Technical Comments, Page 1, ¶ 2, Ron Sahu

*“The application simply includes a broad statement that the flare will combust “any syngas or vent gas” during startup, shutdown, or upset conditions. In the same section, the application also states that “...all process equipment is routed to the flare...” Taken at face value, all equipment and all gases can be vented to the flare at any time there is an “upset.” Therefore, potentially significant quantities of gases can be flared.”*

Exhibit A, Technical Comments, Page 1, ¶ 3, Ron Sahu

*“Clearly, the proposed permit allows flaring of unspecified quantities of gases of unknown composition per II.B.4.a. It allows this during startup, shutdown, and upset conditions.”*

Exhibit A, Technical Comments, Page 1, ¶ 1, Ron Sahu (internal citation omitted)

*“While a flare is present as evident in the application, only emissions from the 1 MMBtu/hr pilot flame from the flare are included in the emissions inventory.”*

DAQ Response:

The commenter argues that the Director failed to meet this obligation because the proposed flare is a source of air pollution. DAQ disagrees with this characterization because the flare is installed as control technology to combust nitrogen purge gas and syngas. The flare is used as pollution control and safety equipment for the gasification process, Fischer-Tropsch Unit, and hydro processing operation during startups and shutdowns.

The only emissions associated with the flare during normal non-upset conditions are the emissions from the pilot light. The flare pilot light’s emissions during such normal operation are miniscule, with a PTE of 0.21 tpy of NO<sub>x</sub> and 0.36 tpy of CO. Historically, BACT for emissions of this level is no additional pollution control equipment, but a requirement of proper maintenance and operation using natural gas. This BACT is imposed in AO conditions II.B.4 and II.B.1.b(A) of the permit, requiring no visible emissions from the flare.

Despite arguing that the flare itself is subject to BACT, the commenter provides no example of a control technology that could be applied to a flare operating during upset conditions, where the flare itself is already a control device for that exact purpose. The emergency flare is designed to concurrently relieve process gases from the fractionator in the hydro processing unit and relieve process gas from gasification. The process gas being flared from the hydro processing unit is mainly hydrocarbons (89 mol%), hydrogen (4 mol%), and pentane (4 mol%). The process gases being flared from the gasification process is mainly hydrogen (59 mol %), carbon monoxide (29 mol%), and carbon dioxide (10 mol%).

A condition will be added to the permit (condition II.B.1.g) limiting the source to four startups a year. The emissions from startup have been included in the PTE of the facility and did not change the classification of the source. Each startup is assumed to be a 72-hour event. The hydro processing startup involves removing oxygen, using nitrogen as purge gas. Hydrogen is

then introduced to initiate the hydrocracking reactions and pressurize the system. The hydro processing startup will last up to 24 hours. The gasification process involves activating the Fischer-Tropsch catalyst and slowly introducing feed gas to the process approximately 13 to 15 hours of gases being routed to the emergency flare.

A condition will be added to the permit (condition II.B.1.g) limiting the source to four shutdowns a year. The emissions from the shutdowns have been included in the PTE of the facility and did not change the classification of the source. Each shutdown estimates feed gases being sent to the flare from the gasification system and the hydro processing operation. The gasification shutdown will stop coal feed gas and initiate nitrogen purge gas to the operation to stabilize the process and ramp down the heaters. This process is estimated to send purge gas to the flare for about 12 hours. The liquids from the hydro processing operations will be routed to the flare and nitrogen will be introduced into the system while the temperature and pressure are being ramped down.

The estimated emissions from all startups and shutdowns in one year are as follows: 0.12 tpy of NO<sub>x</sub>, 0.56 tpy of CO, 14.12 tpy of CO<sub>2e</sub>, and 0.001 tpy of H<sub>2</sub>S.

The emissions from the emergency flare for startups and shutdowns that were added to the source's PTE do not trigger the requirements of R307-410-4<sup>11</sup> (Permits: Emissions Impact Analysis- Modeling of Criteria Pollutants Impacts in Attainment Areas) or R307-410-5 (Permits: Emissions Impact Analysis-Documentation of Ambient Air Impacts for Hazardous Air Pollutants). Because the startups and shutdowns are considered intermittent events that occur only four times a year, the events do not contribute to the 98 percentile (eighth high design value for the NO<sub>2</sub> 1-hour NAAQS).

Therefore, all emissions associated with the pilot light during normal operations are subject to BACT, as explained above. All emissions associated with the flare during startup and shutdown are accounted for in the PTE and limited to four each per year. All emissions associated with upset conditions will be addressed by DAQ under the Breakdown Rule R307-107.

A condition has been added to the permit to restrict the number of startups and shutdowns.

**Comment 33: Environmental Coalition**

Page 14, ¶ 2

*"Here, there are no limitations on flare emissions and no AO emission limits apply when the flares are operating under 'upset' conditions. Therefore, the Breakdown Rule will never apply to the flare because there can be no 'excess emissions' and therefore no 'breakdown' when the flares are operating under upset conditions. Any emissions from the flares would not be in excess of those allowed by the AO, because the proposed AO allows unlimited 'upset' emissions*

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<sup>11</sup> Air quality modeling is required for a new source in an attainment area where a total controlled emission rate per pollutant is greater than or equal to 40 tpy of SO<sub>2</sub>, 40 tpy of NO<sub>x</sub>, 5tpy of PM<sub>10</sub> (fugitive emissions and fugitive dust), 15 tpy of PM<sub>10</sub> (non-fugitive emissions or non-fugitive dust), 100 tpy of CO, and 0.6 tpy of Pb. See Utah Admin. Code R307-410-4.

*from the flares. Without excess emissions, there is no breakdown, no reporting requirement and Rule 307-107 does not apply. Because Rule 307-107 does not serve to prohibit or limit upset flare emissions, it does not 'regulate' them and does not protect short-term NAAQS from upset flare emissions and does not limit the flare emissions for the purposes of calculating PTE."*

DAQ Response:

Refinery flares are subject to separate federal regulations. See 40 C.F.R. § 60.101a. This source is not classified as a refinery, as per Section 60.101a. The flare use is intended for upset/breakdown/emergency and startup/shutdown situations. During normal operations, the gas generated from the process equipment is used for conversion to liquid fuel and to fuel process heaters. There will not be excess gas generated during normal operations and there is no incentive for the source to flare the gas, which is a usable product.

The proposed flare will provide 98% destruction of gases during startup, shutdown and upset/breakdown/emergency. Without the flare, the gases during startups, shutdowns and upset/breakdown/emergency would be vented directly into the atmosphere. The only emissions to be considered in the flare's normal operation are the emissions from the pilot light. The pilot light is a small flame fired on natural gas to combust any gases during and emergency, startup and shutdown situations.

The flare is not intended to be operated on a continuous basis. Any operation, besides the continuous pilot light, constitutes startup/shutdown operations or upset/breakdown/emergency operations. Startup/shutdown operations are controlled by a condition that was added to the permit to regulate the number of startup and shutdowns to four per year each. Upset/Breakdown/Emergency operations are subject to R307-107-1 (Applicability and Timing), R307-107-2 (Reporting), and potentially R307-107-3 (Enforcement Discretion). These provisions assume that malfunction emissions are violations of an applicable approval order but afford DAQ discretion regarding the imposition of fines and penalties.

When calculating the PTE for flares for permitting purposes, the law does not require the inclusion of upset emissions because such upset emissions are not considered part of normal operations. See *Sierra Club v. Wyoming Dep't of Env'tl. Quality*, 251 P.3d 310, 314 (Wyo. 2011) (holding that "hypothesizing the worst possible emissions from the worst possible operation is the wrong way to calculate potential to emit . . . PTE includes only emissions that occur during normal operations" thus "cold start" emissions and "malfunctions" were properly excluded from the plant's PTE); see also *United States v. Louisiana-Pacific Corp.*, 682 F. Supp. 1141, 1158 (D. Colo. 1988). Accordingly, malfunction emissions were not included in the PTE calculations for the flare, which instead is based on the "average non-upset throughput to [the] flare" and appropriate emissions factors. See Holly Order at 45.

Contrary to the commenter's contention that upset emissions are unlimited under the AO, if upset emissions occur in excess of Revolution Fuels' limits, such emissions may be excused if they satisfy the requirements of Utah's Unavoidable Breakdown Rule ("UBR"). See Utah Admin. Code R307-107. Under the UBR, unavoidable breakdown emissions can be violations of an approval order, but DAQ is afforded discretion as to whether to seek enforcement if a source is in compliance with the other requirements of the rule, including monitoring and good

combustion practices. *See id.* The commenter's claim that proposed permit allows unlimited upset emissions is incorrect. The limits in the proposed permit contemplate zero upset emissions from the flare. Any exceedance of the permit limits, due to upset conditions or otherwise, is a violation of the permit.

Finally, the commenter's claim that the Breakdown Rule "does not 'regulate' [upset flare emissions] and does not protect short-term NAAQS from upset flare emissions and does not limit the flare emissions for the purposes of calculating PTE" takes issue with the Breakdown Rule itself. If the commenter considers the rule to be insufficient, it must address that concern through rulemaking, not a permitting action.

A condition has been added to the permit to restrict the number of startups and shutdowns.

**Comment 34: Environmental Coalition**

Page 15, ¶ 2 (footnotes omitted)

*"As a starting point for the Director's BACT analysis, he should reference, at a minimum, Subpart Ja of the New Source Performance Standards for Petroleum Refineries (Subpart Ja). Subpart Ja applies to flares that commence construction, reconstruction or modification after June 24, 2008 and include a suite of standards that apply at all times that are aimed at reducing SO2 emissions from flares. The level of control prescribed by the Clean Air Act Section 111 for NSPS is the 'best system of emission reduction' of BSER. EPA arrives at BSER by examining emissions reductions achieved by the different systems available and the costs of achieving those reductions. After considering all of this information, EPA then establishes as the relevant NSPS the appropriate standard representative of BSER."*

DAQ Response:

This source is not a petroleum refinery as defined in 40 C.F.R. § 60.101a because the feedstock in this process is not a petroleum derivative. For this reason, the NSPS referenced by the commenter does not apply to this source. The commenter does not explain how Subpart Ja would apply in this case, nor does the commenter identify any other NSPS that might be applicable, and does not identify any other control that would be the best system of emission reduction. *See* response to Comment 32 addressing BACT for the flare. The flare is intended to operate during startup, shutdown and upset/breakdown/emergency conditions, as listed in condition II.B.4.a of the proposed permit.

No changes were made to the AO as a result of this comment.

**Comment 35: UPHE**

Page 24, ¶ 4

*"... the ITA essentially places no restrictions on emissions from the flare. Given that, how can DAQ accept Revolution Fuels emissions estimate as representative of real operating conditions?"*

DAQ Response:

The permit does reflect real operating conditions. As listed in condition II.B.4.a of the proposed permit, this flare will operate as intended—during startup, shutdown and

tpy; PM10: 15 tpy; PM2.5: 10 tpy; Particulate matter: 25 tpy; Ozone: 40 tpy of volatile organic compounds and Lead: 0.6 tpy. The estimated emissions from the flare do not meet the significant definition in the rule.

The source will be responsible for complying with the opacity limit in the permit. This limit applies at all times, and is subject to inspection and recording by DAQ.

A condition will be added to the permit to limit the number of startup and shutdowns annually.

**Comment 38: WRA**

Page 2, ¶ 3

*“As also explained in the Sierra Club comments, without monitoring, recordkeeping and reporting requirements, the visibility “requirement” is not federally enforceable and cannot serve to limit PTE for the purposes of determining whether the plant is indeed a minor modification. See e.g. NSR Workshop Manual at A.1, A.4-A.9.2 Because PTE represents the maximum capacity of a source to pollute, the Director’s PTE must estimate emissions during the worst-case scenario, when the flare is emitting the maximum pollutants it is capable of releasing while still complying with applicable federally and practically enforceable permit limitations. Here, where there are no monitoring, recordkeeping or reporting restrictions on the flare, the “emission limitation” is not federally enforceable and does not limit PTE. NSR Workshop Manual at A.5 (“Practical enforceability means the source and/or enforcement authority must be able to show continual compliance (or noncompliance) with each limitation or requirement.”). Furthermore, Congress requires that “emission limitations” and “emission standards” ensure “continuous emission[s] reduction[s]” and be monitored and enforced to guarantee continuous compliance with the limit or standard. 42 U.S.C. § 7602(k). Plainly, the visibility “requirement” achieves none of these outcomes.”*

DAQ Response:

DAQ disagrees with the commenter’s contention that the visibility requirement is not enforceable. See response to Comment 37 (monitoring, recordkeeping and reporting requirements); Comment 1 (enforceability); Comments 36 (visibility requirements); Comment 19 (PTE). Method 9 is an EPA-approved method of determining visible emissions in permit condition II.B.1. Proposed Conditions II.B.4.b and II.B.4.b.1 were removed from the proposed permit to add clarity for opacity limitations. Condition II.B.1.b limits the flare to no visible emissions as per Condition II.B.1(A). Condition II.B.4.b.1 referencing Method 22 for determining compliance was removed due to conflict with Condition II.B.1 performing opacity observations as per Method 9.

**Comment 39: WRA**

Page 3, ¶ 4; Page 4, ¶¶ 1-2 (footnote omitted)

*“Moreover, effective and frequent monitoring, recordkeeping and reporting are especially important in this case, because the proposed project involves new designs and technology and no project of this scale has yet to be proposed that was not a major source.”*



*In short, there is no guarantee that the project will not produce emissions sufficient to qualify it as a major source. Given the significant legal, environmental and health impacts that would result if the project is in fact a major source, effective monitoring is essential.*

*Monitoring sufficient to establish continuous compliance with any applicable emission limitations and frequent reporting requirements are essential to upholding public involvement in the permitting process and enforcement of the permit. Without access to emissions data reported to the Director as a requirement of the permit, the public will have no way of knowing if emission limits are being violated and whether the project is contributing to any NAAQS violations. Public involvement in the permitting and enforcement processes is mandated by the Clean Air Act, and is essential to government transparency and the democratic process.”*

DAO Response:

This general comment refers to PTE and compliance monitoring. However, the commenter does not tie the comments to any particular emissions unit or permit condition other than stack testing,<sup>12</sup> and cites no authority for the arguments that it makes regarding monitoring, recordkeeping, and reporting. *See also* response to Comment 37.

The commenter speculates that due to new design and technology involved in this project and the scale of this project compared to some unidentified and unknown projects, it is highly likely that Revolution Fuels is a major source. DAQ’s review of the source and the emissions impact analysis and its conclusion based on properly collected and examined data shows that the proposed project is a minor source. *See* response to Comment 20 (explaining the emissions impact analysis).

This project’s PTE was calculated using two alternative scenarios, the first one included the use of Selective Catalytic Reduction (SCR) controls and the second one excluded these same controls. *See* NOI at 3-11. The project qualifies as a minor source with or without these controls, as shown in NOI Table 3-1. *See id.* The project’s PTE without the controls with the startup and breakdowns in tons per year are: PM<sub>10</sub> (fugitive) at 1.5 tpy, PM<sub>10</sub> (non-fugitive) at 28.9 tpy, PM<sub>2.5</sub> at 28.9 tpy, NO<sub>x</sub> at 93.61 tpy, SO<sub>x</sub> at 1.91 tpy, VOC at 9.22 tpy, CO at 95.36 tpy, and CO<sub>2e</sub> at 295.876 tpy. These numbers are all below the 100 tpy threshold for a major project. *See* Utah Code Ann. R307-101-2 (definition of “major source”). Thus, Revolution Fuels is not subject to the Compliance Assurance Monitoring (CAM) rule in 40 C.F.R. Pt. 64.

Additionally, coal-to-liquid fuel technology is not a new technology and has been in existence since the 1920s. The process, known as Fischer-Tropsch (FT) Synthesis, uses gasification to convert carbon materials to carbon monoxide and a hydrogen-rich synthetic gas. This synthesis gas, or syngas, is fed into an FT reactor that condenses the gas over a catalyst and converts it to wax and liquid products that can be refined into a variety of synthetic fuels.

No changes were made to the AO as a result of this comment.

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<sup>12</sup> DAQ addresses the stack-testing requirement in responses to Comments 75a-75b.

II.B.1.c(G). In summary, the DAQ disagrees with the commenter that the monitoring, recordkeeping and reporting requirements are inadequate or are missing, and the commenter does not address these specific provisions in the proposed permit or otherwise explain in any meaningful way why such provisions are unenforceable. The commenter also suggests the Director must estimate emissions from coal operations using a worst-case scenario. *See* response to Comments 4 and 19 addressing PTE and worst-case scenario.

The commenter suggests that the DAQ cannot be certain that this source is properly classified as minor because the PTE may be higher due to DAQ not imposing federally enforceable monitoring, recordkeeping and reporting requirements on the coal handling opacity limits. There are several problems with this argument. First, to support their claim, the commenter cites the NSR Manual. *See* response to Comment 1 for an explanation of the status of the NSR Manual. Second, DAQ is confident that the AO properly accounted for PTE and subsequently classified this source as minor because it limits the coal handling operation's PTE by three proposed conditions: (1) operation configuration proposed limit in condition II.B.3.b;<sup>15</sup> (2) opacity proposed limit in condition II.B.1.b;<sup>16</sup> and (3) coal throughput proposed in condition II.B.1.c(G).<sup>17</sup> This facility is a listed source as defined in R307-101-2—a fuel conversion plant. In this instance, the DAQ has counted fugitive emissions in the PTE and is confident the PTE is properly characterized and is supported by enforceable conditions in the AO.

No changes were made to the AO as a result of this comment.

**Comment 59: Environmental Coalition**

Page 18, ¶ 4; page 19, ¶ 1 (footnote omitted)

*“ . . . South Coast Air Quality Management District (SCAQMD) Rule 1158 that governs the storage, handling and transport of coal. The purpose of Rule 1158 is ‘to reduce the emissions of airborne particulate matter from the storage, handling, and transport of . . . coal[.]’ . . . The California rule presents BACT, or at a minimum, the Director is required to address the rule in*

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<sup>15</sup> “The coal handling, radial stacker conveyor shall be covered and fugitive emissions shall be controlled by water sprays. The coal handling crushing, conveying and drop points shall be covered and controlled by a baghouse. [R307-401-8]” AO at 8.

<sup>16</sup> “Visible emissions from the following emission points shall not exceed the following values:

- A. Flare and combustor - no visible emissions
- B. Crusher - 15% opacity
- C. Coal Handling Baghouse - 10% opacity
- D. Ash Removal Baghouse - 10% opacity
- E. All natural gas/syngas operated equipment - 10% opacity
- F. Paved Haul Roads - 20% opacity
- F. All other points - 20% opacity

Opacity observations of emissions from stationary sources shall be conducted according to 40CFR 60, Appendix A, Method 9. [R307-401-8]” *Id.* at 15.

<sup>17</sup> “Consumption

G. 273,750 tons of coal per rolling 12 month total” *Id.*

*his BACT analysis. This is particular [sic] warranted because the Director's analysis of BACT of PM for the coal storage pile lacks any basis in the record."*

DAQ Response:

DAQ acknowledges rules from other states, as they can serve as possible control technologies to be evaluated for a particular proposal that the DAQ is reviewing. However, the commenter has not identified and DAQ is not aware of any Utah state or federal rule that requires the DAQ to consider a rule from another state as BACT for a minor source in Utah. The rules cited by the commenter are only applicable in the South Coast Air Quality Management District in California but are not applicable in Utah.

In Utah, R307-401-5(d) requires an analysis of BACT for the proposed source or modification. The definition of BACT is found in R307-401-2 and has been quoted in response to Comment 46. DAQ reviewed the BACT analysis submitted by the source. See NOI, Section G.6.2. The source indicated the coal pile will be subject to Standards of Performance for Coal Preparation and Processing Plants, 40 C.F.R. Pt. 60, Subpart Y. The source also identified water spray/surfactant, inherent moisture, and enclosures for dust controls. The source ruled out enclosures on active coal piles as being economically infeasible. The source will control the coal processing, conveying, transferring, loading, and storing as required by 40 C.F.R. § 60.254. In Section 60.254(c), a fugitive coal dust emissions control plan must be prepared (taking into consideration 40 CFR 60.254(c)(1) through (6)) and the source must operate in accordance with the fugitive coal dust emission control plan. DAQ determined BACT for the coal storage pile to be water sprays and conducting operations in compliance with the fugitive coal dust emission control plan as required by Section 60.254(c) and an opacity limitation of 20%. See Source Plan Review at 10. The DAQ included this requirement in proposed permit condition II.B.1.b.

No changes were made to the AO as a result of this comment.

**Comment 60: Environmental Coalition**

Page 20, ¶ 3 (footnote omitted)

*"There is nothing in the proposed AO that requires the coal to be moist or that requires monitoring of the moisture content of the coal. Similarly, there are no monitoring requirements for the use of the water sprays or the baghouses opacity limit. Yet, the Director relies on the 'high moisture content of the coal,' the use of water sprays and the opacity limit as a key components of his BACT. In the absence of the moisture requirement, along with associated monitoring, recordkeeping and reporting mandates, the Director has failed his BACT responsibilities. The measure does not meet the definition of BACT and there is nothing in the proposed permit to suggest that the Director has required the maximum reduction of emissions achievable at the plant. Similarly, without monitoring reporting and recordkeeping requirements, the water spraying and opacity limit are not BACT 'emission limitations' and are not federally-enforceable for the purposes of determining PTE. While he apparently purports to address the "material transfer operations," the Director's BACT review of this source of emissions is absent or unclear. BACT for transfer point involves the enclosure of the operations."*

DAQ Response:

The proposed emissions associated with the coal storage piles is 1.36 tpy of PM10. The comment does not acknowledge or dispute that Revolution Fuels used a moisture content of 10% in the calculations, which is typical and conservative for this type of operation. The coal handling operations are subject to the proposed permit condition II.B.3.b, “The coal handling, radial stacker conveyor shall be covered and fugitive emissions shall be controlled by water sprays. The coal handling crushing, conveying and drop points shall be covered and controlled by a baghouse.” Additionally, permit condition II.B.1.b(C) coal handling baghouse has a 10% opacity limitation. The coal handling operation is also subject to 40 C.F.R. § 60.250, which includes specific standards for this operation in Section 60.254. The BACT limit has been implemented through an opacity limitation on the baghouse and site, and not monitoring of moisture content.

See response to Comment 59 regarding the suggestion that the Director must consider other state rules in the BACT analysis.

No changes were made to the AO as a result of this comment.

## **Coal Storage Pile**

### **Comment 61: Environmental Coalition**

Page 17, ¶ 2

*“ . . . ITA significantly underestimated the particulate matter emissions from the coal storage pile because the ITA did not utilize wind speed data collected at nearby state-run air quality monitor in Price, Utah. Using the data from the local monitor would yield emissions that are 90% higher.”*

Exhibit A, Technical Comments, Pages 3-4, Megan Williams (footnotes omitted)

*“PM emissions from the coal storage pile could be higher in practice than what was modeled in the NOI. The Intent to Approve does not include any provisions specific to the coal storage pile in the fugitive emissions requirements in II.B.3. The key factors in determining fugitive dust emissions from storage piles include wind speed and size of the pile. The emissions inventory in the NOI assumes the highest daily mean wind speed is 20 miles per hour (mph), citing weatherpark.com. Yet wind speed data collected at the nearby state-run air quality monitor in Price, Utah has recorded maximum wind speeds of 38 mph, 32 mph and 34 mph in 2014, 2013 and 2012, respectively. Winds at this speed would result in estimated PM emissions that are 90% higher than what was modeled in the NOI. The DAQ must account for the potentially higher maximum wind speeds that could occur at the facility and include any additional control measures (e.g., covering, spraying, etc.), as needed, to ensure short-term PM impacts from the facility will not exceed the NAAQS.”*

DAQ Response:

The DAQ monitor in Carbon County has an average of 7 miles per hour wind speed. This is consistent with the average hourly wind speed recorded at the National Weather Service meteorological monitor at the Price airport of 7.3 miles per hour. Maximum recorded wind speeds are generally associated with wind gust, and are only sustainable over a short period of

time. Since the PM10 NAAQS is a 24-hour average concentration, using a maximum wind speed value from a monitor recorded over a few minutes would not be representative of emissions releases over the 24-hour period. The source used the highest daily mean wind speed from [weatherpark.com](http://weatherpark.com) of 20 miles per hour. Using the highest daily average wind speed value to estimate PM10 emissions is representative of the source's maximum potential to emit over the 24-hour period. Use of the maximum daily wind speed to estimate PM10 emissions is conservative by dispersion modeling standards, and results in an overly conservative estimate of model predicted 24-hour concentrations.

As a result, the DAQ made no changes to the PM10 NAAQS modeling analysis.

**Comment 62: Environmental Coalition**

Page 18, ¶ 1 (footnotes omitted)

*“There is no basis in the record for the Director’s assertion that that BACT for the coal storage pile is a 20% opacity limit and compliance with a yet-to-be-determined fugitive coal dust emission control plan. First, any purported reliance on NSPS Subpart Y to comply with BACT is inappropriate. As explained above, the national NSPS are not BACT, but rather represent ‘best demonstrated technology.’ Under Utah’s BACT Rule, NSPS represent the absolute floor for a BACT emission limitation and a starting point from which a search for the best available control technology may begin.”*

DAQ Response:

NSPS are federal standards established by EPA that undergo public comment and stakeholder process involving, among others, industry specialists. NSPS are regularly updated or superseded with new regulations to keep up with changing technology. These federal standards allow industry to understand the “minimum” control technology required for common operation/equipment while controlling a large amount of operations/equipment.

Control technologies applicable to coal storage piles, identified in NSPS Subpart Y, include locating the source inside a partial enclosure, installing and operating a water spray system, applying appropriate chemical dust suppression agents on the source, use of a wind barrier, compaction, or use of a vegetative cover. The rule indicates the owner or operator must select, for inclusion in the fugitive coal dust emissions control plan, the control measures that are most appropriate for site conditions. The Director is not aware of any additional control technologies that would be technologically and economically feasible for the Revolution Fuels coal storage piles that are not identified in this rule.

The DAQ has determined the Subpart Y meets BACT for Revolution Fuels, and that source compliance with the applicable provisions of Subpart Y is BACT for the coal handling operations. See Source Plan Review, Review of Best Available Control Technology at 9-10.

No changes were made to the AO as a result of this comment.

**Comment 63: Environmental Coalition**

Page 18, ¶ 2 (footnotes omitted); Page 19, ¶ 1

*“ . . . the Director asserts without any reference, analysis or citation that ‘enclosing storage piles can be an effective means to reduce wind erosion emissions enclosing stockpiles that are actively used is not feasible.’ Without a foundation in the record, this statement is not supported by substantial evidence and therefore may not serve as the basis for a legally adequate BACT determination.*

*...  
The SCAQMD rule, inter alia,: 1) prohibits fugitive dust emissions for any period more than three minutes in one hour that is equal to or greater than 10% opacity, Rule 1158(d)(1); 2) requires that any coal storage pile be enclosed and equipped with water spray or other controls, Rule 1158(d)(2)(d); and, 3) mandates the paving of all surfaces where material accumulates. Rule 1158(d)(5). Material truck unloading will occur only in an enclosed structure that is vented control equipment or that is equipped with a water spray system. The California rule presents BACT, or at a minimum, the Director is required to address the rule in his BACT analysis. This is particular warranted because the Director’s analysis of BACT of PM for the coal storage pile lacks any basis in the record. In addition, the Director is compelled to consider in his BACT analysis for the coal storage pile SCAQMD Fugitive Dust Rule 403. The purpose of this rule is “to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.” This rule mandates, inter alia: 1) that an operator may not allow visible dust from an open storage pile to move beyond the property line of the emission source; and, 2) that PM10 levels may not increase by more than 50 micrograms per cubic meter as a result of its active operations.”*

DAQ Response:

Totally enclosing the storage piles for controlling fugitive PM10 emissions is not always feasible. The source must comply with 40 C.F.R. § 60.254, which regulates fugitive PM10 emissions from coal open storage piles. The source must submit a fugitive coal dust emissions control plan that must specify a control measure to minimize fugitive coal dust to the greatest extent practicable as per Section 60.254(c)(2). The BACT analysis submitted to DAQ as per UAC R307-401 in Appendix G 6.2 of the NOI determined that the cost associated of controlling 1.38 tpy of PM10 by enclosing the coal storage piles is economically infeasible. The commenter does not address this determination.

See response to Comment 59 regarding the suggestion that the Director must consider other state rules in the BACT analysis.

No changes were made to the AO as a result of this comment.

**Comment 64: Environmental Coalition**

Page 18, ¶ 4 (footnotes omitted)

*“The Director may not rely on a fugitive coal dust emission control plan that has yet to be completed as BACT. Initially, the Director must ensure that BACT has been derived and imposed*

*on the source before he may issue an AO. The Director may issue an AO only if he determines that the "degree of pollution control for emissions... is at least BACT." In addition, the public is guaranteed the opportunity to comment on the proposed permit and to determine whether the Director has met his permitting responsibilities. Without the coal dust emission control plan to review and assess, the public is prevented from commenting on the proposed permit in a meaningful way and from evaluating the Director's compliance with R307-401-8 in general, and his derivation and implementation of BACT."*

DAQ Response:

The Director is relying on 40 C.F.R. § 60.254 as BACT for coal storage piles. The fugitive coal dust control plan is required to meet the requirements of 40 C.F.R. Pt. 60, Subpart Y.

No changes were made to the AO as a result of this comment.

## **Haul Roads**

**Comment 65: Environmental Coalition**

Page 20, ¶¶ 1-2 (footnotes omitted)

*"There are several sources of BACT for the coal storage pile that the Director failed to review. SCAQMD Rule 1158 governs the storage, handling and transport of coal and requires, inter alia: 1) that all vehicle movement areas within the facility be paved, Rule 1158(d)(5); 2) the management of material so that silt loading values of 0.05 and 0.25 grams per meter square are not exceeded or the use of a street sweeper at designated intervals, Rule 1158(d)(7)(A) & (B).*

*Finally, Utah's fugitive emissions rule, deemed to represent reasonably available control technology, represents a starting place from which the Director's BACT analysis should begin. That rule requires fugitive emissions from roads be minimized to the maximum extent possible and mandates the "prompt" cleaning of any roads. The Director's BACT must result in greater emission reductions than what is required by R307-309. However, there is nothing in the record to suggest that the 20% opacity limit reflects the maximum minimization of fugitive emissions or prompt cleaning of road surfaces as required by reasonably available control technology, much less greater emission reductions than R307-309."*

DAQ Response:

See response to Comment 59 regarding the argument that the Director must consider other state rules in the BACT analysis.

The Director determined that BACT for haul roads for this source is paved roads and water sprays. This BACT meets or exceeds the controls required by the California rule as water sprays are more effective than sweeping for fugitive dust control on haul roads. Finally, the Director agrees that the Utah fugitive dust rule represents the starting place for BACT. However, the applicable rule is R307-205, rather than R307-309, which is only applicable in a nonattainment area. This source is located in an attainment area.

No changes were made to the AO as a result of this comment.

and II.B.3.a of the proposed AO, and the commenter does not explain how these provisions are unenforceable.

See response to Comment 37 regarding recordkeeping requirements.

No changes were made to the AO as a result of this comment.

## **Startup/ Shutdown and Upset/Breakdown/Emergency**

### **Comment 71: Environmental Coalition**

Page 10, ¶ 5 (footnotes omitted)

*"All emissions from the flare, including during startup, shutdown and malfunction (SSM) events must be included in the project's emissions estimate. Utah regulations define Potential to Emit (PTE) as 'the maximum capacity of a stationary source to emit a pollutant under its physical and operational design.' 'The definition of 'potential to emit' under the new source regulations is extremely important.' 'Failure to properly estimate all of a facility's emissions is a violation of law.'"*

#### **DAQ Response:**

DAQ requires sources to estimate potential to emit emissions based upon normal operations. Where startup/shutdown emissions can be reasonably estimated they are included in the source-wide PTE.

Upset/Breakdown/Emergency emissions cannot be calculated or reasonably estimated and are never included in the PTE. See Holly Order at 40; 44-46. To control startup/shutdown emissions appropriately, the DAQ has taken two approaches. Where technically feasible, the DAQ will establish separate emission limits that are only applicable during startup/shutdown or will evaluate source operations to estimate the number of startup/shutdown events to occur on an annual basis. For this permit, a condition will be added limiting the source to four startups and four shutdowns a year. The emissions from the startups and shutdowns have been included in the potential to emit of the facility and did not change the classification of the source or trigger any additional modeling.

The flare will be used during upset/breakdown/emergency situations and purging during startups and shutdowns. Upset/Breakdown/Emergency situations are not quantifiable from a permitting standpoint, and not classified as normal operations and shall be covered under R307-107.

The commenter cites several sources in support of its comment. First, the commenter relies on the Riva Memo, an EPA document that the commenter argues requires that malfunction emissions be included in PTE calculations. The Riva Memo was a response from EPA to a state permitting agency that made an inquiry regarding PTE for emergency generators, not a coal-to-liquids facility. However, EPA answered broadly, apparently not tying its answer to any particular type of source but to calculation of PTE generally. In the memo, EPA states that it has no policy that requires exclusion of emergency or malfunction emissions. Despite having no policy, EPA (without citing any authority) then states that "to determine PTE, a source must estimate its emissions based on the worst-case scenario taking into account startups, shutdowns



and malfunctions.” Ex. E, Riva Memo at 1-2 (attached to Environmental Coalition comments). If not on policy grounds, it is unclear on what authority EPA based this statement, as it does not cite the CAA, applicable statutes or regulations, cases, or any administrative decisions. As such, EPA seems to base its answer on undocumented discussions with OAQPS and OECA.

The Riva Memo seems to acknowledge that use of enforcement discretion would be appropriate for upset conditions, at least for the amount of upsets beyond those assumed upsets factored into the PTE in the first place. *Id.* at 2. But in practical terms, for any source upset conditions are always unknown, and can only ever be an estimate. Relying as it is on nothing more than internal discussions and not characterizing itself as a policy pronouncement, the Riva Memo carries little weight and does not overcome DAQ’s stated decision that malfunction emissions, being unpredictable and thus unable to be estimated, are not included in PTE. *See Holly Order at 40; 44-46.*

Second, the commenter relies on EPA Region 8 comments on a Wyoming coal-to-liquids facility. However, EPA’s comments appear to apply only to startups. In this case, both startups and shutdowns are included in the PTE. Therefore, these EPA comments do not appear to contradict anything in the ITA. Moreover, EPA claims that “the regulations do not provide exemptions for excluding startup emissions from a facility’s Potential To Emit (PTE).” Ex. F, EPA Region 8 Comments to WYDEQ at 1 (attached to Environmental Coalition comments). However, EPA Region 8 does not explain to which regulations it refers.

Third, the commenter relies on *In re Masonite Corp.*, 5 E.A.D. 551, 1994 WL 615380 (E.P.A. 1994), raised in the context of PTE for the flare. *See Environmental Coalition comments at 11, n.63.* The commenter says two things: (1) “the Environmental Appeals Board remanded a PSD permit because the EPA failed to consider all emissions of particulate matter related to a modification of a paneling and siding facility. The EPA erred by not counting increases in fugitive emission of PM10 from the handling of wood chips at the facility, and the EAB ‘therefore remanded this issue to the Region to reconsider its determination that there was not a significant net increase of PM10’”; and (2) “[a]ssessing the net emissions increase from a major modification is akin to estimating the potential to emit from a new source; the estimate determines whether or not a BACT analysis must be performed.” *Id.* at 11-12.

The commenter misconstrues and thus misapplies *In re Masonite* to this proposed permitting action. The EAB stated that a remand was necessary because EPA Region 9 had “confused two distinct inquiries, which are subject to different standards.” *In re Masonite*, 1994 WL 615380, at \*18. Specifically, Region 9 had confused a “threshold applicability determination” with a “pollutant applicability determination.” *Id.*, at \*18-19. EAB stated that the first determination is whether a given increase in emissions of a regulated pollutant is major or minor. *See id.*, at \*19. Once determined, a second, distinct inquiry is necessary to determine which pollutants are subject to a BACT analysis. *See id.* EAB determined that fugitive emissions are not included in the former, but are considered in the latter. *See id.*

There are a number of fundamental distinctions between *In re Masonite* and the Revolution Fuels’ proposal. *In re Masonite* deals specifically with fugitive emissions, not malfunction emissions. In *In re Masonite*, EAB pointed to specific regulations that omitted fugitive

emissions from the threshold applicability determination. *See id.*, at \*19. In this case, the commenter points to no regulation stating that malfunction emissions must be either included or excluded from a threshold applicability determination.

In any event, even if the fugitive emissions in *In re Masonite* were directly analogous to the malfunction emissions in the Revolution Fuels proposal,<sup>18</sup> *In re Masonite* contradicts the commenter's claim that the malfunction emissions must be included in the PTE calculation. Specifically, the EAB in *In re Masonite* pointed out that under 40 C.F.R. § 52.21(i)(4)(vii),<sup>19</sup> the PSD requirements do not apply if "the modification would be a . . . major modification only if fugitive emissions, to the extent quantifiable, are considered in calculating the potential to emit of the . . . modification and the source does not belong to any of [a specified set of industry] categories . . ."). EAB pointed out that in *In re Masonite*,

all parties agree that the addition of the MPL will result in a significant net emissions increase of VOCs (and therefore a significant net emissions increase of ozone) without counting fugitive emissions of VOCs. Thus, there is no question that the addition of the MPL constitutes a major modification of the source.

*Id.* at \*19. In this case, Table 3.1 of the NOI shows that even excluding malfunction emissions, Revolution Fuels project would not be a major source. The commenters do not address this table, and in fact, do not address the threshold applicability determination at all, which is the only instance where this question would even be at issue.

In addition, fugitive emissions occur during normal operation, whereas malfunction emissions only occur during upset conditions. This further dilutes the commenter's effort to compare the two. The *In re Masonite* case also dealt with a major source, while the proposed action here is for a minor source.

The second inquiry discussed by EAB in *In re Masonite* relates to the inclusion of fugitive emissions in a BACT analysis in the separate pollutant applicability determination. *See id.*, at \*18-19. EAB stated that, based on the cited federal regulations, "once the Region determined that the addition of the MPL constituted a major modification on the basis of non-fugitive VOC emissions, the Region was required to count fugitive emissions (if quantifiable) of any other regulated pollutant when determining whether a BACT analysis was required for such pollutant." *Id.* Accordingly, EAB concluded "that the Region erred in not counting increases in fugitive emissions of PM10 that may have occurred or will occur from the handling of wood chips at the facility as a result of the major modification," and remanded the case so that EPA could "reconsider its determination that there was not a significant net emissions increase of PM10." *Id.* The critical point here is that in *In re Masonite*, EPA's error was in failing to acknowledge

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<sup>18</sup> Fugitive emissions and malfunction emissions are not analogous. Fugitive emissions occur during normal operation, whereas malfunction emissions only occur during upset conditions.

<sup>19</sup> The fact that *Masonite* addressed 40 C.F.R. § 52.21(i)(4)(vii) is another distinction. This regulation has no application here, as explained in Response to Comment 16.

that a significant net emissions increase had occurred such that a BACT analysis was required for PM10 once fugitive emissions were taken into account, *id.*, not that fugitive emissions had been excluded from the initial PTE determination under the threshold applicability analysis to determine whether the project was major or minor.

In this case, the commenter claims that malfunction emissions must be included in the PTE calculation but provides no analysis of *In re Masonite* other than the brief statement that “[a]ssessing the net emissions increase from a major modification is akin to estimating the potential to emit from a new source; the estimate determines whether or not a BACT analysis must be performed.” Environmental Coalition comments at 11, n.63. The comment does not explain how this statement applies to the comment it makes.

Regardless of the commenter’s misapplication of *In re Masonite*, the Executive Director of the Utah Department of Environmental Quality has already determined that PTE calculations do not include malfunction emissions, which the commenter does not address.

Fourth, the commenter relies on *In re BP Products North America, Inc.*, Order Responding to Petitioner’s Request that the Administrator Object to Issuance of State Operating Permit, Permit No. 089-254880—453 (Oct. 16, 2009) at 6 (hereafter *In re BP Products*), where EPA pointed out that the Indiana SIP “provides that the baseline actual emissions for a modification must include emissions associated with malfunctions, to the extent they are affected by the project.” In this case, the commenter points to no similar provision of the Utah SIP.

Aside from the fact that the commenter cannot point to an analogous provision of Utah law that requires the inclusion of malfunction emissions in PTE calculations (or at least confront previous UDEQ determinations holding to the contrary), there is also a crucial factual distinction present in *In re BP Products*. In that case, the design of the facility would use a recirculation system to reroute excess gas back through the refining process,” *id.*, which would reduce the frequency or amount of flaring at the existing flares. As a result, the permitting authority concluded that using the recirculation system constituted normal operation and did not require a limit on malfunction emissions. *Id.*

However, EPA determined that in some instances, BP would be allowed “to bypass the new flares if they are unavailable and to go directly to the existing flares” during emergencies or flare outages. *Id.* EPA determined that such use of existing flares might qualify as a malfunction. *Id.* EPA decided that even though the permitting authority had intended to “prohibit all emissions from the new and existing flares, including during periods of start-up, shut-down, and malfunctions, to obviate the need to account for such emissions in the potential to emit (PTE) calculation,” it had not placed a legally and practically enforceable prohibition on such emissions. EPA concluded that the permitting authority had to include such a prohibition on those emissions, or “follow any other approach to address flaring emissions during periods of start-up, shut-down, and malfunctions that is consistent with its nonattainment new source review (NNSR) and Prevention of Significant Deterioration) rules.” *Id.*, at \*7.

EPA based its decision on a provision of Indiana’s SIP that required that the “calculation of baseline actual emissions for a modification must include emissions associated with

malfunctions, to the extent they are affected by the project.” *Id.*, at \*6. In this case, commenter has not pointed to any such requirement in the Utah SIP, nor is the proposed project a modification of an existing source, as was the case in *In re BP Products*. It may be that Indiana has opted to require inclusion of malfunction emissions in its SIP, but the commenter points to no such requirement in Utah. Moreover, as explained earlier, the DEQ has already determined that malfunction emissions need not be included in PTE calculations, and such an approach is therefore consistent with Utah’s NSR rules, in this case for a new (as opposed to modified) minor source that is by definition not subject to NNSR or PSD review. The commenter addresses none of these considerations.

No changes were made to the AO as a result of this comment.

## **CO2e Emissions**

### **Comment 72a: Environmental Coalition**

Page 21, ¶ 2

*“The Director failed to consider the significant expected greenhouse gas emissions from the proposed Wellington coal project. The project is estimated to emit almost 300,000 tons per year of CO2e. Yet neither the Applicant nor the Director evaluated the technical and economic feasibility of a carbon capture (and injection) system and possible transport and storage opportunities. Instead, the project intends to simply vent the CO2 to the atmosphere.”*

### **Comment 72b: UPHE**

Page 5, ¶ 3

*“It is evident from the EPA’s diagram that if CTL without carbon sequestration were to become a widely-adopted technology it would become an environmental nightmare. It would reverse the recent progress that our economy has been making in transitioning away from dirty to clean forms of energy. In deciding whether to approve Revolution’s permit, DAQ needs to recognize that this project would be a net economic liability for Utah.”*

### **Comment 72c: UPHE**

Page 25, ¶ 5

*“Approving Revolution Fuel’s CTL project will hasten climate change. It is a hollow argument if DAQ dismisses this consideration because compared to all other climate forcing activities the additional impact of this project will be small. Obviously we must reduce CO2 emissions across the board, not add to them, even in small amounts.”*

### **Comment 72d: Individual Commenter Richard Kanner**

*“After the recent Paris agreement was reached we now have an obligation to reduce global greenhouse gas emissions. Thus, it looks very bad for Utah to permit a new facility that will emit nearly 300,000 tons of CO2. Revolution Fuels must find a way to produce this liquid without emitting that CO2 before this project is permitted.”*

# Exhibit No. 2



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION 2**  
**290 Broadway**  
**New York, NY 10007-1866**

February 14, 2006

Mr. William O'Sullivan, Director  
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New Jersey Department of  
Environmental Protection  
PO Box 423  
401 East State Street, 3rd floor  
Trenton, NJ 08625-0423

Dear Mr. O'Sullivan:

This is in response to your December 13, 2005 e-mail and February 6, 2006 follow-up e-mail inquiry to me regarding a discussion that you saw in Pages 23-25 of the proposed New Source Performance Standards (NSPS) for Stationary Compression Ignition Internal Combustion Engines (ICE). More specifically, you mentioned that in the proposed rule in the evaluation of "best demonstrated technology" for the emergency generators, EPA took into account no hour limits on actual emergency use and that EPA only took into account hours the manufacturer recommended for test firing the units, i.e., 30 hours in this case. You specifically mentioned an EPA statement in the proposed NSPS which says "[t]here is no time limit on the use of emergency stationary ICE in emergency situations." You also mentioned that this approach is consistent with what New Jersey recently did with the NOx RACT rule, i.e., removing the 500 hour/year total use limitation and replacing it with restrictions on the use of the equipment to maintenance and testing recommended by the manufacturer (to be specified in individual permits).

You stated that consistent with the New Jersey NOx RACT Rule and the proposed NSPS, New Jersey intends to specify that the potential to emit (PTE) for emergency generators be the emissions associated with non-emergency use, i.e., the 30 hours in this particular NSPS case (but up to 100 hours in some other cases). According to your proposal, actual emergency use would not count against PTE. You reasoned that otherwise we would be restricting the actual use of emergency generators which is not what New Jersey or EPA intends. New Jersey wanted a confirmation that this approach is appropriate.

We raised this issue with our Office Air Quality Planning and Standards (OAQPS) and Office of Enforcement and Compliance Assurance (OECA). The consensus is that for the purposes of determining PTE in the New Source Review (NSR) and the Title V programs, EPA has no policy that specifically requires exclusion of "emergency" (or malfunction) emissions. Rather,

to determine PTE, a source must estimate its emissions based on the worst-case scenario taking into account startups, shutdowns and malfunctions. The EPA statement that you quote above from the proposed NSPS is for the purposes of determining the actual cost of a control technology for NSPS purposes. As you know, the intended effect of the proposed NSPS standard is to require all new, modified, and reconstructed stationary CI ICE to use the best demonstrated system of continuous emission reduction, considering costs, non-air quality health, and environmental and energy impacts. So in determining the actual cost of the control technology being proposed, EPA took into account no hour limits on actual emergency use of the equipment. In determining PTE, there is no actual cost consideration factored into it. So the EPA statement would not be appropriate in that case.

Consequently, it is EPA's opinion that for the purposes of the NSR and the Title V programs, New Jersey should continue as they have and permit emergency units at some amount of operation sufficiently large to cover emergencies (i.e., 500 hours a year). Malfunctions that may require the operation of the emergency units and that may exceed the 500 hours/year limit could be handled through enforcement discretion on a case-by-case basis, as appropriate.

If you have any questions, please contact me at (212) 637-4074.

Sincerely,

/s/

Steven C. Riva, Chief  
Permitting Section  
Air Programs Branch

bcc: J. Siegel, 2ORC-AIR  
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R. Ruvo, 2APB-SIP  
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APB File

# Exhibit No. 3



**Standards of Performance for  
Coal Preparation and Processing Plants  
(40 CFR 60 subpart Y)**

**Response to Comments Received on  
Proposed Amendments  
(Published April 28, 2008; 73 FR 22901)  
and  
Supplemental Proposal  
(Published May 27, 2009; 74 FR 25304)**

U.S. Environmental Protection Agency  
Office of Air Quality Planning and Standards  
Sector Policies and Programs Division  
Research Triangle Park, NC 27711

September 2009

### 3.4.6.2.2 Enclosure of Coal Storage Piles

**Comment:** One commenter (096) states it is entirely feasible for fugitive dust from coal storage piles to be emitted through a conveyance designed and constructed to emit or capture that fugitive dust. Coal storage piles can be enclosed and their fugitive dust emissions vented to a fabric filter where those emissions can be captured and measured. The commenter references their comments on the original Subpart Y amendment proposal for a list of facilities around the country that are currently utilizing enclosures for coal and coke piles, as well as a discussion of the economic costs and benefits of enclosing piles. In contrast, another commenter (099) stated that power plants typically have both short-term and long-term storage piles which are vastly different in size. Cost and practical considerations in controlling dust from short- and long-term coal piles will vary considerably. Long-term piles can be massive, and may range from 40 acres to over 80 acres in size. The expense of a partial enclosure at such a coal storage pile would be “enormous” according to the commenter.

Commenter 129 disagrees with Commenter 096 regarding requiring open coal piles to be enclosed and vented to control emissions. Commenter 129 states that EPA has ample facts in the record to reject the contention that all storage piles should be covered and vented to a fabric filter because long-term piles can become massive and the cost to cover and control emissions for these massive piles can become quite enormous. Commenter 129 refers to the cost estimates submitted by a third commenter (033) concerning the building of a coal silo for short-term coal storage use and Commenter 129 states that these costs are far beyond what is considered reasonable cost under CAA section 111. Commenter 129 also points out that building domes at the port of Los Angeles Terminal to hold coal before moving it to barges for transport to Asia also exceeds reasonable costs under CAA section 111. They also stated that other examples given by Commenter 096 do not support enclosing coal piles for long-term storage.

**Response:** EPA continues to believe that the cost of requiring open coal storage piles to be enclosed is unreasonable and thus has not determined that complete enclosures with fabric filters constitute adequately demonstrated control technologies for open storage piles at this time.

### 3.4.6.3 Coal Preparation Plant Roadways

#### 3.4.6.3.1 Coal Haul Road Exemption

**Comment:** Two commenters (096 and 113) disagree with the proposal to exclude “roadways that do not leave the property (e.g., haul roads at coal mines)” from this requirement (74 FR 25313). The only reason given for this exclusion is the particular impracticality of, for example, paving roadways that are frequently rerouted (74 FR 25313). The proposal offers no explanation for why wetting the road surface would pose a “particular impracticality” to facility operators, even given that internal haul roads are frequently rerouted. Furthermore, road wetting can be accomplished in a manner that is easy to adjust with the re-routing of haul roads, including the use of water trucks and temporary sprayers. EPA’s rationale also statement is contradicted by the fugitive dust control requirements already included in the title V permits for certain coal preparation plant facilities, and by State regulations that apply to all road types. The commenter cited examples of several title V permits and State regulation requiring implementation of roadway-specific fugitive dust control work practice at coal preparation plants. Commenter 113