

Statement of Basis for Revision to AOP-11 (Renewal #1) for Kaiser Aluminum Fabricated Products

Spokane Regional Clean Air Agency (SRCAA) issued AOP-11 (Renewal #1) to Kaiser Aluminum Fabricated Products (KAFF) on May 19, 2008. Since the permit was issued, some new requirements (i.e., Notice of Construction (NOC) approval order #1410, issued by SRCAA on 4/28/08 and revised on 10/30/09 and 3/19/10 and NOC approval order #1417, issued by SRCAA on 7/18/08 and revised on 10/30/09 and 3/19/10) have become applicable to the facility. According to WAC 173-401-730, when additional requirements become applicable to a source with a remaining permit term of three or more years, the permit must be reopened and revised to include the additional requirements. Since AOP-1 does not expire until May 18, 2013, 2012 (which is more than three years after the additional requirements became effective), the AOP must be reopened to incorporate the new requirements. According to WAC 173-401-730, the permit revision must be completed no later than 18 months after promulgation of the applicable requirement.

The procedures for reopening a permit are established in WAC 173-401-730. Generally speaking, the procedure is the same as for issuing a permit (30-day public comment and 45-day EPA review) except that the portions of the permit being revised are the only ones open for comment, and KAFF must be notified at least 30-days prior to the reopening. In this case, KAFF was notified of the intended reopening by e-mail on November 10, 2009 and via a written letter dated April 23, 2010.

As part of this reopening, the following new and/or revised requirements have been incorporated:

- Requirements contained in SRCAA Notice of Construction (NOC) #1410, issued for the DC-6 regenerative melter on 4/28/08 and revised on 10/30/09 and 3/19/10;
- Requirements contained in NOC #1427, issued for the DC-7 regenerative melter on 7/18/08 and revised on 10/30/09 and 3/19/10;
- Requirements contained in 40 CFR 63, Subpart CCCCCC – “National Emission Standards for Hazardous Air Pollutants for Gasoline Dispensing Facilities” for the gasoline dispensing operation on-site. This regulation was promulgated on 1/10/08 and was inadvertently left out of the renewal permit for KAFF. For existing sources (like KAFF), the compliance date is 1/10/11; and
- Revised requirements contained in SRCAA NOC #1322, NOC #1334, and NOC #1366 for the three heat treat ovens, as revised on 10/30/09.

In addition, as part of this AOP revision, Kaiser has requested (in letters dated September 3, 2009 and September 11, 2009) that AOP-11, Renewal #1 be modified to eliminate the Compliance Assurance Monitoring (CAM) requirements that currently apply to the Induction Furnaces (MRRR 48M) and skim cooler (MRRR 47M). With the two requests, Kaiser submitted source test results demonstrating that the pre-control PTE emissions for both the skim cooler and induction furnaces are both below 100 tpy of PM. In addition, Kaiser also requested multiple other minor revisions and clarifications to AOP-11, Renewal #1. Below is a timeline of the AOP revision and revisions to NOC #1410, #1427, #1322, #1334, and NOC #1366 that occurred during the AOP revision process:

Kaiser AOP Revision Timeline

September 1, 2009	Kaiser submitted written request to revise PM emission limits contained in NOC #1410 & NOC #1427
September 3, 2009	Kaiser submitted written request to SRCAA to remove CAM requirements applicable to skim cooler from AOP
September 11, 2009	Kaiser submitted written request to SRCAA to remove CAM requirements applicable to induction furnaces from AOP
September 11, 2009	Kaiser submitted written request to SRCAA to revise natural gas usage estimation method in NOC #1322, NOC #1334, NOC #1366, NOC #1410 and NOC #1427
September 18, 2009	SRCAA e-mail to Kaiser asking for more info on requested AOP revisions
September 22, 2009	Kaiser e-mail to SRCAA answering questions from 9/18/09 e-mail
September 25, 2009	Kaiser submitted revised written request to revise PM emission limits contained in NOC #1410 & NOC #1427
October 30, 2009	SRCAA issued revised NOC #1410 & NOC #1427 approval orders with revised PM emission limits and natural gas estimation method (revised per Kaiser's request)
October 30, 2009	SRCAA issued revised NOC #1322, NOC #1334, & NOC #1366 approval orders with revised natural gas usage estimation method (revised per Kaiser's request)
November 6, 2009	Kaiser e-mail to SRCAA with additional requested revisions to AOP
November 6, 2009	Kaiser e-mail to SRCAA with request to revise NOC #660, NOC #676, & NOC #683
November 10, 2009	SRCAA e-mail to Kaiser with 1 st draft of revised AOP attached for review
November 18, 2009	Kaiser e-mail to SRCAA with request to rescind NOC #660, NOC #676, & NOC #683 revision request (sent on November 6, 2009)
February 3, 2010	Kaiser submitted request to revise NOC #1410 and NOC #1427 CO emission limits

February 4, 2010	Kaiser e-mail to SRCAA with comments on 1 st draft of revised AOP and additional requested revisions to AOP
March 19, 2010	SRCAA issued revised NOC #1410 & NOC #1427 approval orders with revised CO emission limits (revised per Kaiser's request)
April 1, 2010	SRCAA e-mail to Kaiser with 2 nd draft of AOP attached for review (incorporating NOC #1410 & NOC #1427 revisions)
April 23, 2010	SRCAA sent formal letter to Kaiser notifying them of upcoming AOP re-opening
May 13, 2010	Kaiser e-mail to SRCAA with comments on 2 nd draft of revised AOP and additional requested revisions to AOP
July 13, 2010	SRCAA e-mail to Kaiser with 3 rd draft of revised AOP attached for review
July 19, 2020	Kaiser e-mail to SRCAA with comments on 3 rd draft of revised AOP and additional requested revisions to AOP
July 20, 2010	SRCAA e-mail to Kaiser with 4 th draft of revised AOP attached for review
July 26, 2010	Kaiser e-mail to SRCAA stating that Kaiser reviewed and approved the 4 th draft of revised AOP sent for review on July 20, 2010

This document is intended to provide the statement of basis for the revisions that are being made to AOP-11, Renewal #1 (i.e., the requirements are listed, the regulatory basis for each new and revised requirement is provided, and associated monitoring, recordkeeping, and reporting is discussed).

PROPOSED REVISIONS TO AOP-11

The revised AOP-11, Renewal #1 was prepared using the "track changes" feature in Word in order to document the revisions made during the permit reopening. The following list summarizes the major revisions that are included under this permit reopening:

1. The cover page and header of the permit were revised to include a revision date. The expiration date of the permit will remain the same.
2. SRCAA's address was updated in the permit to reflect the new location. In addition, all references to SCAPCA were revised to reflect the updated agency name.
3. The asbestos requirements, given in Condition 45, were updated to include the most recently adopted local and state regulations.

4. The SRCAA odor requirements given in Condition 56 were updated to include the most recently adopted regulation.
5. Conditions 70 -73, 81, 85 – 86, 106, and 107 - 110 were revised to include NOCs #1410 & NOC #1427 as the basis for the requirements. These requirements apply to the all of the melters (existing cold-fired and new regenerative melters).
6. Conditions 75-80 and Condition 104 were added to Section **II.B Remelt Area Emission Limitations**. These requirements only apply to the new regenerative #6 & #7 melters and are given in NOC #1410 & NOC #1427.
7. Section **II.H.Gasoline Dispensing Facility Emission Limitations** was added to the permit (Condition 152). This section includes the requirement that applies to the gasoline dispensing equipment given in 40 CFR 63, Subpart CCCCCC, "National Emission Standards for Hazardous Air Pollutants for Gasoline Dispensing Facilities."
8. The skim cooler baghouse and induction furnaces baghouse were added to Condition 1M of Section **II.J Monitoring, Recordkeeping, & Reporting Requirements** because the CAM requirements for the skim cooler baghouse and induction furnaces baghouse were removed from the permit, and there were no remaining monitoring requirements for ensuring that visible emission requirements are met. As a result, these emission units were added to the general condition MRRR 1M that requires KAFP to check for the presence of visible emissions.
9. Condition 5M of Section **II.J Monitoring, Recordkeeping, & Reporting Requirements** was revised to reference the most recent version of the O&M plan for the remelt area.
10. Conditions 5M – 7M, 9M, 28M – 31M, and 33M - 36M of Section **II.J Monitoring, Recordkeeping, & Reporting Requirements** were revised to include NOCs #1410 & NOC #1427 as the basis for the requirements. These requirements apply to the all of the melters (existing cold-fired and new regenerative melters).
11. Condition 24M of Section **II.J Monitoring, Recordkeeping, & Reporting Requirements** was revised to change the required annual servicing requirements for the boilers. This condition is gapfilled (i.e., not based on any underlying permit or regulation) and therefore, can be revised in the AOP without any other permitting revisions. The revised condition more accurately reflects the inspection and maintenance activities that Kaiser performs on the boilers annually to ensure proper combustion is occurring and that the units are in proper working condition.
12. Conditions 48M - 51M were added to Section **II.J Monitoring, Recordkeeping, & Reporting Requirements**. These requirements are given in NOC #1410 & #1427 for the regenerative melters #6 & #7 and serve as the monitoring, recordkeeping, and reporting requirements (MRRR) for Conditions 75-80.
13. Condition 42M of Section **II.J Monitoring, Recordkeeping, & Reporting Requirements** was revised to reflect the 10/30/09 revisions made to NOC #1322, NOC #1334, and NOC #1366 for the three heat treat ovens. The revised condition allows KAFP to estimate daily gas usage for the ovens if when daily gas usage is not available due to unavoidable circumstances (e.g., utility database data recovery interruptions, etc.), provided that specific

requirements are met (e.g., gas usage cannot be estimated for more than 3 consecutive days, etc.).

14. Condition 47M of Section **II.J Monitoring, Recordkeeping, & Reporting Requirements**, which contained the CAM requirements for the skim cooler and baghouse at Kaiser was removed from the permit. In the renewal application for AOP-11, Kaiser submitted an estimated potential to emit that showed particulate emissions from the skim cooler prior to the baghouse (i.e., uncontrolled emissions) at above 100 tons per year. As a result, Kaiser submitted a CAM plan with the renewal application, and the requirements from the CAM plan were incorporated into the renewal AOP-11.

In a letter dated September 3, 2009, Kaiser submitted a revised potential to emit estimate that shows particulate matter emissions from the skim cooler prior to the baghouse are less than the 100 ton per year CAM trigger. The revised analysis is based on baghouse outlet source test data of 0.0001 gr/dscf and an assumed baghouse removal efficiency for particulate matter of 99.5%. Using the source test results of 0.0001 gr/dscf and the baghouse airflow of 33,190 dscfm, Kaiser calculated expected outlet emissions of 0.125 tons/year. Using a baghouse removal efficiency of 99.5%, this would equate to 24.8 tons/year of particulate entering the baghouse inlet (i.e., uncontrolled baghouse fines), which is less than the 100 ton per year CAM trigger.

To test the reasonableness of the 24.8 tons/year uncontrolled baghouse fines value, Kaiser also reviewed its disposal records for fines collected by the baghouse and found that there is reasonably good agreement between the calculated and measured amounts of collected baghouse fines. Based on disposal records from January 2004 – March 2009, there was an average of 1.68 tons/month or 20.17 tons/year of baghouse fines collected.

The calculated value of 24.8 tons/year baghouse fines and the disposal records of 20.2 tons/year baghouse fines both show that the uncontrolled PTE for the skim cooler is less than 100 tpy for particulate emissions. As a result, the CAM requirements are not applicable to the skim cooler and baghouse.

15. Condition 48M of Section **II.J Monitoring, Recordkeeping, & Reporting Requirements**, which contained the CAM requirements for the induction furnaces and baghouse at Kaiser was removed from the permit. In the renewal application for AOP-11, Kaiser submitted an estimated potential to emit that showed particulate emissions from the induction furnaces prior to the baghouse (i.e., uncontrolled emissions) at above 100 tons per year. As a result, Kaiser submitted a CAM plan with the renewal application, and the requirements from the CAM plan were incorporated into the renewal AOP-11.

In a letter dated September 11, 2009, Kaiser submitted a revised potential to emit estimate that shows particulate emissions from the induction furnaces prior to the baghouse are less than the 100 ton per year CAM trigger. The revised analysis is based on source test results from a test that Kaiser had Golden Specialty Consulting perform on the inlet to the induction furnace baghouse. The test results show that the uncontrolled PTE for the induction furnaces is 2.44 tons/year, which is less than 100 tpy for particulate emissions. As a result, the CAM requirements are not applicable to the induction furnaces and baghouse.

16. Condition 52M was added to Section **II.J Monitoring, Recordkeeping, & Reporting Requirements** of the permit. This requirement is given in 40 CFR 63, Subpart CCCCCC for

the gasoline dispensing facility at Kaiser and serves as the monitoring, recordkeeping, and reporting requirements (MRRR) for Condition 152.

- 17. A portion of the conditions in the revised AOP-11 were re-numbered to account for the conditions that were added and removed. In addition, the Table of Contents was updated to reflect the conditions that were added and removed.
- 18. A portion of the requirements were revised to reflect the most recently SRCAA approved version of operation and maintenance plans.
- 19. Several one-time requirements that have already been met were removed from the permit (e.g., initial combustion test for heat treat ovens required in Condition 41M).
- 20. Minor editing (typographical errors corrected, grammatical editing, etc.) was performed to improve the clarity and readability of the permit.

PREPARED BY: _____
April L. Westby

DATE: _____

This Statement of Basis and the Operating Permit to which it applies have been reviewed by:

_____, P.E.
April Westby, P.E.

DATE: _____

Ronald J. Edgar, Chief of Technical Services

DATE: _____

William Dameworth, Control Officer

DATE: _____