STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY

IN THE MATTER OF: United States Steel Corporation	**SCHEDULE OF COMPLIANCE Multi-Media Pollutant Reduction**

Part 1. ***PARTIES.*** This Schedule of Compliance for Multi-media Pollutant Reductions a ("Agreement" or "Schedule") applies to and is binding upon the following parties:

a. United States Steel Corporation ("Regulated Party")

b. Minnesota Pollution Control Agency ("MPCA")

Unless specified otherwise in this Agreement, where this Agreement identifies actions to be taken by the MPCA, the Commissioner or the Commissioner's designees shall act on the MPCA's behalf.

Part 2. ***PURPOSE AND SCOPE OF SCHEDULE OF COMPLIANCE.*** The purpose of this Agreement is to enact a multi-pollutant multi-media strategy at the Regulated Party's Minnesota Ore Operations Minntac and Keetac facilities to reduce air quality emissions, water quality pollutant discharges and resolve outstanding water quality non-compliance at the Minntac tailings basin.

This Agreement amends the following agreements between the Regulated Party and the MPCA so that that each of the following agreements are terminated and superseded by this Agreement:

a. The termination language, Part 27, in the September 8, 2008, Stipulation Agreement is hereby amended to allow that that agreement may be terminated when its requirements are incorporated into another compliance document. As a result, the September 8, 2008, Stipulation Agreement is hereby terminated upon the effective date of this Agreement.

b. The termination language, Part 24, in the November 14, 2007, Schedule of Compliance is hereby amended to allow that that agreement may be terminated when its requirements are incorporated into another compliance document. As a result, the November 14, 2007, Schedule of Compliance and the February 25, 2010 Amendment No.

to the November 14, 2007 Schedule of Compliance are hereby terminated upon the effective date of this Agreement.

c. The termination language, Part 18, in the August 11, 2010, Mercury Air Emission Reductions Schedule of Compliance is hereby amended to allow that that agreement may be terminated when its requirements are incorporated into another compliance document. As a result, the November 14, 2007, Schedule of Compliance is hereby terminated upon the effective date of this Agreement.

Part 7 of this Agreement specifies what actions the Regulated Party agrees to undertake to resolve alleged violations set out in Part 6 as well as water quality issues associated with the Minntac tailings basin seep discharges and air quality issues. By entering into this Schedule, the Regulated Party is settling a disputed matter between itself and the MPCA and does not admit that the alleged violations set out in Part 6 of this Agreement occurred. However, solely for the purposes of implementing Part 10 of this Agreement, the Regulated Party agrees that the MPCA may rely upon the alleged violations set out in Part 6 as provided in Part 10 of this Agreement. Except for the purposes of implementing and enforcing this Agreement, nothing in this Agreement constitutes an admission by either Party, or creates rights, substantive or procedural, that can be asserted or enforced with respect to any claim of or legal action brought by a person who is not a party to this Agreement.

Part 3. ***AUTHORITY.*** This Agreement is entered under the authority vested in the MPCA by Minnesota Statutes Chapters 115 and 116.

Part 4. ***DEFINITIONS.*** Unless otherwise explicitly stated, the definitions in Minnesota Statutes Chapters 115, 115A, 115B, 115C, 116, 116B and in Minnesota Rules Chapters 7000 to 7151 apply, as appropriate, to the terms used in this Agreement.

Part 5. ***BACKGROUND.*** The following is the background of this Agreement:

a. The Regulated Party operates two taconite mining and processing facilities in Minnesota; Minnesota Ore Operations Minntac and Keetac. The Regulated Party and the MPCA have agreements in place to resolve alleged water quality non-compliance at the Minntac tailings basin and an agreement detailing how it will adhere to the "Implementation Plan for Minnesota's Statewide Mercury Total Maximum Daily Load" (Mercury TMDL Implementation Plan) dated October 2009, including Appendix 6

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"Guidelines for New and Modified Mercury Air Emission Sources" for the proposed new taconite indurating furnace (Phase III) at the Keetac facility and existing Keetac and Minntac operations. The Regulated Party holds an air emissions permit for the Minntac facility which contains a schedule for pilot testing and installing technically feasible Nitrogen oxide control technologies. As provided herein, this Agreement incorporates the requirements of these agreements, references the air emissions permit and contains additional requirements to reduce the air quality and water quality impacts from the Minntac and Keetac facilities. This Agreement details (1) installation of a surface water seepage collection system on the Dark River side of the Minntac tailings basin, (2) decreasing sulfate and hardness levels in the Minntac tailings basin and reducing particulate air emissions by replacing Minntac's wet scrubbers with higher performing control equipment, (3) reducing mercury emissions from the Minntac and Keetac facilities by installing activated carbon injection or equivalent mercury control equipment and evaluating mercury control technologies, (4) reducing sulfur dioxide emissions from Minntac by installing a gas suspension absorber or equivalent dry control equipment, and (5) continuing work to reduce nitrogen oxide emissions by complying with its air emissions permit conditions.

Air Quality Background

b. The MPCA does not allege and this Schedule is not intended to imply that there currently exists air emissions noncompliance at either the Minntac or Keetac facilities

c. The Clean Air Act requires U.S. EPA to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The Clean Air Act requires periodic review of the NAAQS and the science upon which the NAAQS are based and the standards themselves. U.S. EPA has recently promulgated more stringent standards for sulfur dioxide (SO_2), nitrogen dioxide (NO_2) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). This agreement will assist in the demonstration of compliance with the recently adopted standards for those pollutants.

d. In 1999, U.S. EPA announced an effort to improve air quality in national parks and wilderness areas such as Voyageurs National Park, the Boundary Waters

Canoe Area Wilderness and Isle Royale National Park. This agreement will reduce impacts on visibility that are important to the Regional Haze program.

e. In 2008, the MPCA issued an air emissions permit for the Minntac facility to resolve alleged PSD violations concerning alleged modifications to the facility. The permit requires NO_X control equipment pilot testing and increasingly more stringent NO_X emission limits.

Mercury Background

f. The MPCA does not allege and this Schedule is not intended to imply that there exists mercury reduction noncompliance at either the Minntac or Keetac facilities

g. One purpose of this Schedule is to detail the MPCA and Regulated Party's activities related to conducting mercury control research, reporting results to the MPCA, and installing feasible mercury control technologies on existing USS' facilities operating taconite indurating furnace Lines 3, 4, 5, 6 and 7 at the Regulated Party's Minntac facility and Phase II at the Keetac facility. These activities will be conducted to adhere to the "Implementation Plan for Minnesota's Statewide Mercury Total Maximum Daily Load" (Mercury TMDL Implementation Plan) dated October 2009, including Appendix 6 "Guidelines for New and Modified Mercury Air Emission Sources" for the proposed new taconite indurating furnace (Phase III) at the Keetac facility. The Mercury TMDL Implementation Plan calls for statewide mercury reductions from existing mercury emitting facilities by 2025.

h. The Regulated Party will reduce mercury emissions from its Minntac and Keetac facilities consistent with the Mercury TMDL Implementation Plan, however, USS' proposed taconite indurating furnace, Phase III, at Keetac, will add new mercury emissions to the statewide emission inventory of mercury emitting sources. The actions described in this agreement are intended to ensure that the Regulated Party will reduce emissions from its Minntac and Keetac facilities consistent with the Mercury TMDL Implementation Plan and will do so before the 2025 goal date. The early reductions will achieve the same or lower cumulative mercury emissions for the years 2008-2025 as would occur without the new contribution from the proposed new taconite indurating furnace, Phase III, at Keetac. To achieve this, the Regulated Party has a goal of installing mercury controls at Minntac and Keetac to ensure that the increase in mercury emissions

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from Phase III at Keetac is completely offset by these reductions and to achieve the 2025 target total mercury emission goal from Minntac and Keetac together of 72.8 lbs/yr. See Appendix A for a graphical representation of emission reductions.

i. The MPCA adopted a Statewide TMDL for mercury in 2007. By its terms, Minnesota established that mercury air emissions should be reduced to a statewide total of 789 pounds of mercury per year by 2025. To reach the total reductions, the MPCA developed a Mercury TMDL Implementation Plan in consultation with representatives of mercury-emitting sources. The Plan establishes industry sector-specific mercury reductions that must be met in order to achieve the final, state-wide reductions.

The Mercury TMDL Implementation Plan establishes mercury emission reduction commitments for the Ferrous Mining and Processing Industry: U. S. Steel Minntac, U. S. Steel Keetac, Hibbing Taconite, United Taconite, ArcelorMittal, Northshore Mines, Essar Steel and Mesabi Nugget, to reach a target of 210 lb/yr of emissions by 2025 and establishes related interim goals and implementation guidelines. Achievement of that target requires a 75 percent reduction from the baseline of 841 lbs/yr for the Ferrous Mining and Processing Industry.

j. The State of Minnesota, through its MPCA, will implement the Mercury TMDL Implementation Plan. This effort includes the MPCA's continued application of the "Guidelines for New and Modified Mercury Air Emission Sources" and rulemaking to require certain mercury-emitting facilities to develop enforceable mercury emission reduction plans to meet the sector and source reduction targets and timeframes listed in the Mercury TMDL Implementation Plan. The MPCA recognizes the mercury control technology testing and installation that the Regulated Party has committed to at Keetac and Minntac. To the extent possible, the MPCA's continuing implementation of the Plan will account for mercury emission reductions that the Regulated Party achieves at Keetac and Minntac.

k. As provided in the Mercury TMDL Implementation Plan, by June 30, 2016, or a date established by the MPCA rule, the MPCA will require submittal of a schedule for reducing mercury emissions from the ferrous mining and processing industry by 2025.

l. As its contribution to achieving the TMDL Implementation Plan target of 210 lb/yr of emissions for the ferrous mining and processing industry by 2025, the Regulated

Party has committed to a goal of reducing total emissions to 72.8 lb/yr by 2025, a 75 percent reduction from the baseline of 291.1 lb/yr from Regulated Party taconite indurating furnace lines at Minntac and Keetac.

m. Once the Major Amendment to Air Emissions Permit (13700063-004) is issued and in effect for the Regulated Party's Keetac facility, the Regulated Party will commit to installing and operating mercury control technology on the new taconite indurating furnace at Keetac (Phase III). The Air Emissions Permit will include associated monitoring, recordkeeping and reporting requirements. Projected emissions from this new furnace are up to 54.0 lb/yr.

n. To date, no mercury control technologies have been tested long term or installed on a taconite indurating furnace. The majority of the published information and research on mercury control technologies is based on coal-fired utility boilers.

o. The results of the research to be conducted by the Regulated Party are likely to be applicable to other mining operations on the Iron Range, which may accelerate achievement of the sector wide ferrous mining and processing industry Mercury TMDL Implementation Plan mercury emission reduction goal.

Water Quality Background

p. On March 20, 2009, the Regulated Party submitted a National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) permit application as required by the November 14, 2007 Agreement between Regulated Party and the MPCA. In that application, the Regulated Party proposed a water management strategy based in part on installation of a Process Water Treatment System (PWTS) to treat up to 7,000 gallons/minute of recirculating process water, as well as installation of a tailings basin seep collection and return system to capture surface seepage that discharges to the Sand River watershed. After submittal of the application the Regulated Party requested the MPCA to not act upon the application while the Regulated Party investigated refinements to the PWTS proposed in the permit application.

q. The Regulated Party proposed instead to implement a Dry Controls Project to eliminate or reduce pollutants in the tailings basin at their source. The Regulated Party has determined that instead of installing a PWTS to treat process water while continuing to transfer air pollutants from the wet scrubbers to the recirculating process water, it will

instead eliminate the substantial source of pollutants entering the recirculating process water through installation of dry emission controls.

r. The Dry Controls Project consists of the following control equipment installations, in lieu of the existing wet scrubber on Line 6. Due to the size of the equipment it cannot be located within existing structures; therefore construction timing will be critical to the project timeline.

1. A dry electrostatic precipitator (ESP) or equivalent dry control equipment to reduce air emissions of particulate matter (PM), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$).

2. A gas suspension absorber or equivalent dry control equipment to reduce air emissions of Sulfur dioxide (SO2).

3. Activated carbon injection or equivalent control equipment to control mercury (Hg) to reduce air emissions of Mercury (Hg).

s. By replacing wet scrubbers with dry emission controls, a very significant reduction in the mass of pollutants transferred to the recirculating process water and passing through the tailings basin will be accomplished. In addition, the Dry Controls Project is expected to achieve emissions reductions for PM, PM_{10}, $PM_{2.5}$, Sulfur dioxide (SO_2), and Mercury (Hg) greater than the existing control equipment.

t. On September 8, 2008 a Stipulation Agreement between the Regulated Party and the MPCA became effective. The Stipulation Agreement required, among other things, that the Regulated Party hire a consultant, identify corrective actions necessary to ensure compliance with the NPDES/SDS permit requirement that there be no net increase in sulfate and hardness to the tailings basin as a result of operation of the Line 3 scrubber, and propose a schedule for implementing the recommended corrective actions, for MPCA review and approval. As required by the Stipulation Agreement, the Regulated Party submitted an Implementation Plan to the MPCA dated January 21, 2009. The Implementation Plan indicated that the Regulated Party intended to rely upon the PWTS to accomplish the permit requirement of no net sulfate and hardness increase to the tailings basin. As indicated in Part 5.p. above, the Regulated Party is no longer considering installation of a PWTS and so the Regulated Party, per the requirements of

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the Stipulation Agreement, must identify and implement other corrective actions that ensure compliance with the no net sulfate and hardness increase requirements of the permit.

Part 6. ***ALLEGED VIOLATIONS***

a. **NPDES/SDS Permit No. MN0057207 Chapter 4, Part 3.1** states, in-part:

> On an annual basis, the mass of sulfate leaving the scrubber system shall be less than or equal to the mass of sulfate entering the scrubber system.

The NPDES/SDS permit prohibits any increase in the mass of sulfate leaving the scrubber system as a result of the line 3 scrubber operation. The following table indicates the total pounds of sulfate that were added to the process wastewater as a result of the treatment system operation between 2006 – 2010:

Year of Operation	Excess Pounds of Sulfate
2006	80,847
2007	69,839
2008	54,904
2009	18,207
2010	57,558

b. **NPDES/SDS Permit No. MN0057207 Chapter 4, Part 3.2** (April 21, 2006, permit modification) states, in-part:

> On an annual basis, the number of moles of excess hydroxide ion…must be equal to or greater than the number of moles of excess calcium …in the thickener overflow stream.

The NPDES/SDS permit prohibits any increase in calcium in wastewater leaving the scrubber system as a result of the line 3 scrubber operation. In 2006, 141,312 pounds of calcium was added to the process wastewater as a result of the line 3 scrubber operation.

NPDES/SDS Permit No. MN0057207 Chapter 4, Part 3.2 (September 13, 2007, permit modification) states, in-part:

> On an annual basis, the number of moles of excess hydroxide ion…must be equal to or greater than the number of moles of excess calcium and magnesium…in the thickener overflow stream.

The NPDES/SDS permit prohibits any increase in hardness in wastewater leaving the scrubber system as a result of the line 3 scrubber operation. The following table indicates

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the total pounds of hardness ($CaCO_3$) that were added to the process wastewater as a result of the treatment system operation between 2007 – 2010:

Year of Operation	Excess Pounds of Hardness ($CaCO_3$)
2007	241,167
2008	352,125
2009	31,133
2010	741,468

Part 7. ***REQUIREMENTS.*** All reports, studies, recommendations and schedules that are required to be submitted by the Regulated Party to the MPCA and are approved by the MPCA shall become enforceable parts of this Agreement.

Particulate Matter, Sulfur Dioxide, and Mercury Air Emissions Reduction Requirements – Dry Controls Project

a. Within 60 days of the effective date of this Agreement, the Regulated Party will submit to MPCA a permit amendment application to permit the installation of the "Dry Controls Project" on Taconite Production Line 6 at the Regulated Party's Minntac facility.

b. Without prior MPCA approval, the Regulated Party shall not withdraw its application for installation of the Dry Controls Project. Should the Regulated Party's request to withdraw its application for installation of the Dry Controls Project be denied by MPCA, the Regulated Party may invoke Dispute Resolution under Part 11 of this Agreement.

c. The Regulated Party will commence construction on the Dry Controls Project within 90 days after the effective date of required permits by MPCA or other regulatory agencies, provided that no judicial or administrative appeal(s) or citizen suit(s) challenging such permit(s) have been filed (Permit Issuance).

d. The Regulated Party will complete construction of the Dry Controls Project no more than 22 construction months after the effective date of required permits. A "construction month" is defined as any month falling between mid-April and mid-November; the calendar months when construction is possible in the region.

e. No more than 12 calendar months after completed construction, the Regulated Party shall complete the commissioning, shakedown, and performance evaluation of the

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Dry Controls Project. During the performance evaluation, the Regulated Party shall collect at least six calendar months of data. Dry Controls Project performance evaluation data collection shall include, at a minimum, the following parameters: (1) control equipment performance for PM, PM_{10}, $PM_{2.5}$, SO_2, and Mercury (Hg) (in pounds per hour); (2) the nitrogen oxides/nitrogen dioxides (NO/NO_2) ratio for the stacks affected by the installation; (3) parametric monitoring records; (4) multi-pollutant co-control benefits; (5) cross media impacts; (6) energy efficiency or consumption impact; (7) technical and economic feasibility; and (8) impact on pellet quality.

f. No more than 14 calendar months after completed construction, the Regulated Party shall submit to the MPCA for its review and approval a report detailing the results of the Dry Control Project. The report shall include detail of each of the items listed above and the supporting justification and background data. The report shall also include a proposed schedule for the installation of additional Dry Control Projects at Regulated Party operations in Minnesota.

g. Within 60 days of MPCA approval of the Regulated Party's proposal for additional Dry Control Projects, the Regulated Party will submit required permit applications including schedules for commencing and completing construction, commissioning, and performance evaluations for each additional Dry Controls Project on other lines at the Minntac facility.

h. Without prior MPCA approval, the Regulated Party shall not withdraw its application(s) for installation of additional Dry Controls Projects. Should the Regulated Party's request to withdraw its application for installation of additional Dry Controls Projects be denied by MPCA, the Regulated Party may invoke Dispute Resolution under Part 11 of this Agreement.

i. Upon permit issuance, within 30 days after the end of each calendar quarter, the Regulated Party shall submit to the MPCA a summary of Dry Controls Project activities completed in that quarter and expected outcomes for the next quarter. The summary should provide information so that the MPCA can track the status of the effort; including the installation dates and the other measures used as milestones in the proposed schedule.

<u>Nitrogen Oxides Air Emissions Reduction Requirements</u>

j. The Regulated Party will install a Low NO_x Burner on Taconite Production Line 6 at the Regulated Party's Minntac facility, pursuant to the requirements of the facility's current air emissions permit, the schedule approved by the MPCA on January 18, 2011, and any subsequent schedules approved by the MPCA.

k. The Regulated Party shall operate, evaluate, and report on the Taconite Production Line 6 Low NO_x Main Burner in compliance with the Regulated Party's Minntac's current air emissions permit, the schedule approved by the MPCA on January 18, 2011, and any subsequent schedules approved by the MPCA.

l. Installation of nitrogen oxide control technologies on additional taconite production lines at the Regulated Party's Minntac facility, shall comply with the requirements of the facility's current air emissions permit and any schedules approved by the MPCA.

Modeling and Excess Emissions Reductions

m. The Agreement may be amended to add requirements for NAAQS SO_2, NO_2 and $PM_{2.5}$ modeling after it has been requested of all Minnesota taconite facilities by MPCA.

n. If excess emission reductions are achieved at the Minntac facility and/or the Keetac facility, beyond those required by the Mercury TMDL and/or the culpability studies for the NAAQS at the Minntac facility and/or the Keetac facility, the excess emission reductions shall be available for use by Minntac or Keetac, as appropriate, in any current or future netting analyses, as allowed by NSR/PSD regulations, or the Mercury TMDL.

Mercury Air Emissions Reduction Requirements

o. The Regulated Party shall calculate and report the annual mercury emissions from each indurating furnace at the Minntac facility and the Keetac facility, both current and new indurating furnaces. The Regulated Party shall use the most current stack test or mass balance result for each furnace to calculate mercury emissions. The Regulated Party shall submit this calculation to the MPCA by May 1 of each year for the preceding calendar year. The first report shall be due on May 1, 2014, for calendar year 2013. For all annual mercury accounting reports, the Regulated Party shall use the method approved

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pursuant to this paragraph or a method specified in the applicable rules in effect at the time of the report.

p. Within 30 days after start of construction of Phase III [new taconite indurating furnace line] at Keetac, the Regulated Party shall submit an Engineering Evaluation of Potentially Feasible Mercury Control Technologies (Engineering Evaluation) and a proposal to trial a mercury control technology at its Minntac facility or the existing line at the Keetac facility for the MPCA approval. Mercury control technologies will be evaluated in the Engineering Evaluation with the purpose of selecting a technology for a short-term trial. The Engineering Evaluation will identify mercury control technologies potentially feasible for application at a taconite indurating furnace, although only one technology will be selected for the first short-term trial testing. The technologies considered and evaluated for potential selection as a technology for short term trial testing shall include, but not be limited to, the direct capture of mercury from process gas using carbon compounds, the addition of compounds to process gas to promote oxidation and capture of mercury, and the addition of compounds to wet scrubbers to improve mercury capture.

q. To facilitate review and approval of the Engineering Evaluation, the MPCA may request meetings or conference calls with the vendors, equipment suppliers, engineering firms, or others involved in providing bids or data to the Regulated Party for the Engineering Evaluation. The MPCA shall limit its inquiry to three vendors of the technologies reviewed in the Engineering Evaluation. The Regulated Party shall cooperate in arranging such meetings or conference calls.

r. For each technology identified, the Engineering Evaluation shall evaluate: (1) level of mercury reduction, (2) cross media impacts, (3) multi-pollutant co-control benefits or difficulties, (4) energy efficiency or consumption impact, (5) impacts on pellet quality, (6) economic feasibility, and (7) technical feasibility (evaluation criteria). The Engineering Evaluation shall include the identification of each technology, a ranking of the technologies and justification for the ranking and selection of the technology proposed for the first short-term trial testing. The Engineering Evaluation shall also include a thorough description of the proposed short-term trial technology, a test schedule for the short-term technology trial, proposed monitoring and recordkeeping, and an

evaluation of whether the proposed short-term trial technology requires any MPCA permits prior to implementation.

s. Within 30 days of the MPCA approval of the Engineering Evaluation, the Regulated Party shall submit a test plan in accordance with Minn. R. 7017.2001 to 7017. 2060 to conduct a short-term trial of mercury control technology at Minntac or the existing line at Keetac (Phase II indurating furnace) in accordance with the approved short-term trial proposal.

t. The Regulated Party shall commence implementation of the short-term trial no later than 90 days following the later of the MPCA approval of the Regulated Party's test plan or, if a permit(s) are necessary for the short-term trial the effective date of the permit(s), and shall complete the short term trial in accordance with the schedule approved by the MPCA.

u. The Regulated Party shall submit a short-term trial report to the MPCA within 60 days after completion of the short-term trial. The short-term trial report shall include, at a minimum, fuel Hg content(s) (ppm dry and lb/MMBtu), fuel input rate for all fuels (MMBtu/hr), dry greenball Hg content (ppm dry), fired pellet Hg content (ppm dry), pellet production rate (LT/hr), air pollution control device captured solids Hg content (ppm dry), mass rate (lb/hr) and flue gas concentration (ppm dry) of Hg entering and exiting the mercury control technology, control efficiencies (percent reduction), and control equipment parameter(s) identified in the short-term trial proposal. The Regulated Party will describe if the technology tested is sufficiently promising to warrant long term testing and justification for the conclusion reached in the report. The Regulated Party shall include in its report a proposal of either a long term trial or a short term trial for the next highest ranked technology.

v. The next short term trial shall proceed as described in Parts 7.s, 7.t and 7.u. If the Regulated Party concludes in the report on the second short term trial that the technology is not sufficiently promising to warrant long term testing, the Regulated Party shall submit to the MPCA for approval an updated Engineering Evaluation identifying the mercury reduction strategies/technologies that have been developed since the preparation of the original Engineering Evaluation and update the information in the original Engineering Evaluation in this short term trial report. A third short term trial

shall proceed as described in Parts 7.s, 7.t, and 7.u unless the revised Engineering Evaluation concludes no further trials are justified and the MPCA approves. The MPCA may request meetings or conference calls with the vendors, equipment suppliers, engineering firms, or others involved in providing bids or data to the Regulated Party for the revised Engineering Evaluation. The Regulated Party shall cooperate in arranging such meetings or conference calls.

w. If the revised Engineering Evaluation concludes no further trials are justified, evaluation of mercury control technologies will recommence if the MPCA identifies any potentially feasible mercury control technologies not previously reviewed in the Engineering Evaluation and notifies the Regulated Party that additional evaluation of a technology is required. Within 90 days of the MPCA notifying the Regulated Party, the Regulated Party will submit an evaluation of the technology and a schedule for short-term trial if the technology meets the evaluation criteria identified in Part 7.s. If the Regulated Party concludes that the technology is not suitable for a short-term trial, it will provide copies of all relevant documents and a complete justification for rejecting the technology for short-term trial.

x. If the Regulated Party becomes aware of a new technology, which the Regulated Party prefers to test in lieu of the previously identified technologies, the Regulated Party will notify the MPCA of the technology as soon as practicable. Within 60 days of initial notification to the MPCA of the technology, the Regulated Party will submit to the MPCA information supporting testing of the new technology including a permit applicability determination and a trial schedule for the MPCA approval. The information shall include consideration of the evaluation criteria in Part 7.s, and justification for selection of the new technology for short-term trial testing. the Regulated Party will commence testing based on the MPCA approved schedule and after permit issuance, if a permit is required.

y. If the short term trial concludes that the tested technology is potentially feasible based on the evaluation criteria, the Regulated Party shall submit a proposal for a long-term trial to MPCA for approval within 60 days after completion of the short-term trial. The proposal shall describe the goals for the trial, the criteria to be used to determine the success of the mercury control technology application, a schedule for

construction, startup, operation, conclusion of the trial and final report submittal. The Regulated Party shall evaluate its proposed long-term trial technology to determine whether it must apply for the MPCA permits prior to implementation of the long-term trial.

z. Upon the MPCA approval of the Regulated Party's proposal for long-term trial of a selected technology, the Regulated Party shall conduct a long-term trial of a mercury control technology on one existing line. The Regulated Party shall commence implementation of the long term trial within 90 days of the later of the MPCA approval of the long-term trial report or, if a permit(s) is necessary for the long-term trial, from the effective date of the permit(s), and has a goal of completing the long term trials within 18 calendar months after startup of the long term mercury control technology trial.

aa. Within 60 days after completion of the long-term trial, the Regulated Party shall submit a report on the results of the long-term trial. The report shall include an evaluation of mercury controls for installation on the Regulated Party operating taconite indurating furnace lines, addressing the evaluation criteria established in the trial proposal as well as describing what changes to mercury control(s) design or operation were identified from the trial that will be needed to achieve or improve mercury control performance. The report shall also propose a technology or technologies and a schedule for installation on existing operating taconite indurating furnace lines to meet the emission goal.

bb. If the long-term trial report proposes a technology for installation, within 60 days after the MPCA approval of the long-term trial report and technology proposal, the Regulated Party shall submit permit application(s) and a schedule for installation of the selected technology on necessary the Regulated Party operating taconite indurating furnace lines to reach the 2025 goal.

cc. If the long-term trial report proposes no technology for installation and the MPCA agrees, the Regulated Party shall proceed with another short term trial as described in Parts 7. s, 7.t, 7.u, 7.y, 7.z, and 7.aa.

dd. Upon submitting permit application(s) for installation of the selected technology on remaining necessary the Regulated Party operating taconite indurating

furnace lines to meet the reduction goal, the Regulated Party may submit a request to terminate this Schedule.

ee. If by June 30, 2016, the Regulated Party and the MPCA agree that short term and long term testing have not identified technologies for installation and no additional technologies have been identified for testing, the Regulated Party 's testing obligations will be fulfilled by cooperating with the Mercury- Emissions - Reduction Research and Implementation Council established pursuant to the Mercury TMDL Implementation Plan the Regulated Party's cooperation will continue until mercury technologies have been installed or other mercury reduction actions have been taken that meet the Regulated Party's mercury emission reduction goal.

Mercury Air Emissions Reduction Contingency Conditions

ff. The following conditions describe actions the Regulated Party will implement to minimize mercury emissions in the event that long term trial testing is not initiated. By no later than January 1, 2016, the Regulated Party shall submit a plan and schedule for MPCA approval, that is consistent with the Guidelines for New and Modified Mercury Air Emission Sources to offset cumulative mercury emissions from the operation of Phase III from startup of Phase III through January 1, 2025. The plan will include an evaluation of the modification of the particulate matter scrubber operation at Minntac to route mercury-containing scrubber solids from the front of the taconite process to the tailings basin ("wasting scrubber solids").

gg. By no later than June 30, 2016, or within 60 days of approval by the MPCA, the Regulated Party shall implement the plan and schedule if long term trial testing of mercury controls has not been initiated.

Line 3 Scrubber Blowdown Treatment System Requirements

hh. The Regulated Party shall implement corrective measures necessary to resolve the alleged violations indicated in Part 6 of this Agreement by October 31, 2011. If the Regulated Party believes it cannot comply with this deadline for reasons beyond its control the Regulated Party shall follow the procedures described in Part 13 of this Agreement to request an extension. In addition to the requirements of Part 13, the extension request must include a detailed chronology of the Regulated Party's actions to address the alleged violations since submittal of the MPCA approved Implementation

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Plan, dated January 21, 2009. Specifically, the request must provide details of actions taken by the Regulated Party to address the alleged violations as expeditiously as possible after the Regulated Party determined that the process water treatment system proposed in the March, 2009 NPDES/SDS permit application would not be implemented, and indicate why, for reasons beyond the control of the Regulated Party, implementation of corrective measures to resolve the alleged violations by October 31, 2011 are not feasible

ii. Within 30 days of the effective date of this Agreement, the Regulated Party shall submit a Management Alternatives Report to MPCA. The Management Alternatives Report shall include evaluations of reuse of Line 3 scrubber blowdown and alternate makeup sources to offset the increase of sulfate and hardness generated by the Line 3 scrubber system.

jj. If the Regulated Party determines that the alternatives identified in the Management Alternatives Report are not feasible, within 60 days of the effective date of this Agreement the Regulated Party shall submit to the MPCA a Line 3 Scrubber Blowdown Treatment System Evaluation Report (Treatment Evaluation Report) that summarizes the Regulated Party's consultants' proposals for modifications to or replacement of the existing Line 3 scrubber blowdown treatment system. The Treatment Evaluation Report shall identify recommendations to ensure compliance with the Permit requirement for no net increase in total sulfate and hardness as a result of operation of the Line 3 scrubber.

kk. Within 90 days of the effective date of this Agreement the Regulated Party shall provide written notification to the MPCA indicating which recommendations within the Management Alternatives Report or the Treatment Evaluation Report shall be implemented.

1. If the Regulated Party proposes to implement the recommendations of the Management Alternatives Report, a schedule for completing activities necessary to implement the water management alternatives shall be included, for MPCA review and approval. The Regulated Party shall submit an application for modification of the NPDES/SDS permit to the MPCA within 30 days of receiving MPCA approval of the schedule for implementing recommendations of the Management Alternatives Report.

2. If the Regulated Party proposes to implement the recommendations of the Treatment Evaluation Report, a schedule for implementation, including a schedule for process demonstration and treatment optimization of at least two technologies, shall be included for MPCA review and approval.

i. The Regulated Party shall submit a Process Optimization Study (Optimization Study) that provides results of process demonstration and treatment optimization of two technologies within 90 days of MPCA approval of the schedule for implementing the Treatment Evaluation Report recommendations. If the conclusions of the Optimization Study indicate that at least one technology can be successfully implemented, the Optimization Study shall include a schedule for completion of construction necessary to implement full scale treatment, for MPCA approval.

ii. If the conclusions of the Optimization Study indicate that no technology can be successfully implemented, the Optimization Study shall recommend other approaches for meeting the permit-required no net increase in sulfate and hardness to the tailings basin as a result of operation of the Line 3 scrubber system, with a schedule for implementation of alternatives, for MPCA approval.

iii. Within 30 days of MPCA approval of an Optimization Study that concludes at least one technology can be successfully implemented, the Regulated Party shall submit an application for permit modification.

ll. Following commissioning of the Line 6 Dry Controls Project, as specified in Part 7.d, the Regulated Party shall complete an analysis of the monthly mass of sulfate diverted from Minntac's recirculating process water system by the Line 6 Dry Controls Project. When the cumulative mass of sulfate and hardness diverted from the recirculating process water system exceeds the overall net increase in sulfate which had resulted from operation of the Line 3 scrubber, the Regulated Party may submit a notification to MPCA to discontinue any treatment technology or management alternative that may have been included in the Line 3 Project, for MPCA consideration.

mm. Should any submittal or request pursuant to paragraphs ii through mm be rejected or denied by MPCA, the Regulated Party may invoke Dispute Resolution under Part 11 of this Agreement.

<u>Dark River Monitoring Requirements</u>

nn. Within 20 days of the effective date of this Agreement the Regulated Party shall contact the Minnesota Department of Natural Resources (DNR) to discuss DNR recommendations for flow validation monitoring of the Dark River downstream of the Minntac Tailings Basin.

oo. Within 30 days of contacting DNR the Regulated Party shall submit a Dark River Monitoring Plan (Monitoring Plan) for establishing flow validation and water chemistry monitoring stations as identified in the Monitoring Plan, for MPCA review and approval. The Monitoring Plan shall include a description of flow validation methodology as well as specific location information for each site and a schedule for startup of flow monitoring stations. In no case shall startup of the stations occur more than 60 days after receipt of approval to access the sites or MPCA approval of the plan, whichever occurs later.

pp. Upon startup of operation of the monitoring stations established on the Dark River, the Regulated Party shall conduct monitoring of all parameters indicated in the MPCA approved Monitoring Plan, according to the schedule indicated in the Monitoring Plan. Analysis of all parameters except field parameters as identified in the Monitoring Plan must be conducted by a laboratory certified by the Minnesota Department of Health for those analyses.

qq. The Regulated Party, beginning with the first month after startup of flow validation monitoring, shall submit the results of flow validation and water chemistry monitoring as a supplement to the next monthly Discharge Monitoring Reports (DMRs) submitted for NPDES/SDS Permit No. MN0057207. The DMRs shall continue to be submitted electronically to MPCA and are not required to be submitted to the MPCA case contact.

rr. The Regulated Party shall conduct baseline monitoring prior to installation of any seep collection infrastructure on the west side of the Minntac tailings basin. If installation of a seep collection system on the west side of the Minntac tailings basin proceeds, monitoring shall continue in accordance with the terms specified by the NPDES / SDS Permit that was modified or reissued to authorize construction of the collection system. If installation of a seep collection system does not proceed, the Regulated Party may submit to the MPCA, for review and approval, a request to end

monitoring of the Dark River. Should the Regulated Party's request to end monitoring of the Dark River be denied by MPCA, the Regulated Party may invoke Dispute Resolution under Part 11 of this Agreement.

ss. By February 1 of each year the Regulated Party shall submit an Annual Dark River Monitoring Report (Monitoring Report) that summarizes monitoring results for the previous calendar year at each monitoring location identified in the Monitoring Plan. The Annual Monitoring Report shall include tables of results of monthly constituent monitoring, as well as a flow validation monitoring results. The annual report shall continue in accordance with the terms specified by the NPDES / SDS Permit that was modified or reissued to authorize construction of the collection system

Dark River Seepage Collection and Return System Requirements

tt. Within 60 days of the effective date of this Agreement the Regulated Party will retain a professional consultant to evaluate and report on the feasibility of collecting surface seepage from the west side of the Minntac tailings basin for return to the recirculating process water system (Feasibility Report) to eliminate the discharge of surface seepage to the Dark River Watershed (Dark River Seep Collection and Return System - SCRS).

uu. Within 60 days of the effective date of this Agreement the Regulated Party shall contact appropriate federal, state and local wetland permitting authorities to discuss the potential SCRS and introduce wetland permitting authorities to the project in an attempt to facilitate the wetland permitting process, if it is determined that the SCRS is feasible. By December 31, 2011, the Regulated Party shall complete delineation of wetlands that, based upon best available information, would likely be impacted by construction of the SCRS, should the SCRS project proceed.

vv. Within 180 days of the effective date of this Agreement the Regulated Party shall submit to the MPCA for approval their consultant's completed Feasibility Report for the SCRS. The Feasibility Report shall identify specific recommendations for construction and operation of a SCRS and provide estimates of the volume per unit time of seepage water that would be collected through elimination of surface seeps or shall identify specific reasons why the project is infeasible.

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ww. If the Feasibility Report concludes that a SCRS is feasible, the Regulated Party shall submit an application to the MPCA for modification or reissuance of the NPDES/SDS permit within 30 days of MPCA approval of the Feasibility Report.

xx. Within 90 days of permit application submittal the Regulated Party shall submit Plans and Specifications for the SCRS to the MPCA for review and approval.

yy. The Regulated Party shall commence construction of the SCRS following the latter of either MPCA approval of the SCRS Plans and Specifications or the expiration of any appeal period for the permit issued by MPCA or other appropriate regulatory agencies pursuant to the application(s) submitted to such agencies and provided that no judicial or administrative appeal(s) or citizen suit(s) challenging such permit(s) have been filed. If these conditions are satisfied during the period of April 15 through September, 30, 2011, initiation of construction of the SCRS within 30 days is required, otherwise initiation of construction shall be delayed until the next construction season. A construction season is defined as April 15 through December 15. If weather and/or site conditions prohibit construction, the Regulated Party shall follow the procedures described in Part 13 of this Agreement to request an extension.

zz. The Regulated Party shall notify the MPCA of SCRS construction commencement within 10 days of construction initiation.

aaa. The Regulated Party shall complete construction of the SCRS within eight consecutive construction season months during one or more construction season(s).

bbb. The Regulated Party must initiate operation of the SCRS within 30-days of completion of the SCRS and notify the MPCA of SCRS initiation within 10 days of initiation.

Dark River Mitigation Contingency Plan Requirements

ccc. Within 60 days of the effective date of this Agreement the Regulated Party shall retain a consultant to investigate Dark River flow augmentation strategies. The Regulated Party shall notify the MPCA within 10 days that it has retained a consultant.

ddd. Within 210 days of the effective date of this Agreement the Regulated Party shall provide a Dark River Flow Augmentation Report (Augmentation Report) which was developed by the Regulated Party's consultant. The Augmentation Report shall: (1) identify the maximum flow rate which the identified augmentation options

could provide, (2) identify whether the concentrations of any pollutants in the source water used for augmentation may exceed Dark River water quality standards, including, at minimum total hardness, specific conductance, total sulfate, and total dissolved solids, and 3) identify potential locations for discharging augmentation water into surface waters within the Dark River watershed. If augmentation water quality does not meet the water quality standards of the proposed receiving water the Augmentation Report shall include a literature review of treatment technologies that may provide adequate treatment of augmentation water to ensure compliance with the applicable water quality standards.

eee. Within 240 days of the effective date of this Agreement the Regulated Party shall meet with DNR and MPCA staff to evaluate whether or not operation of the SCRS would have the potential to have an adverse impact on the Dark River. An adverse impact is defined as operation of the SCRS causing (1) a significant decrease in critical low flow quantity or (2) a significant increase in the duration of the critical low flow period at the monitoring stations identified by monitoring as required by Part 7. pp of the Agreement that would not have occurred had the SCRS not been in operation.

fff. If MPCA staff determine that the SCRS does not have the potential to adversely impact the Dark River, the Regulated Party may request of the MPCA that monitoring of the Dark River be terminated. Should the Regulated Party's request to terminate the monitoring of the Dark River be denied by MPCA, the Regulated Party may invoke Dispute Resolution under Part 11 of this Agreement.

ggg. If MPCA staff determine that the SCRS has the potential to adversely impact the Dark River and that flow augmentation options appear feasible based on the Augmentation Report, the MPCA shall notify the Regulated Party of such determination in writing. Within 30 days of such determination, the Regulated Party shall submit a schedule for either implementing construction activities necessary to initiate augmentation or a schedule for conducting bench and pilot scale testing of treatment technologies to ensure that augmentation water meets applicable receiving water standards, for MPCA review and approval. The Regulated Party shall implement the approved schedules upon receipt of written notification from the MPCA that the SCRS has caused adverse impacts to the Dark River.

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hhh. If MPCA staff determine that the SCRS has the potential to adversely impact the Dark River and that no augmentation options appear feasible based on the Augmentation Report, the MPCA shall notify the Regulated Party of such determination, in writing. Within 90 days of such determination the Regulated Party shall submit a summary of mitigation project options with implementation schedules that would offset possible adverse impacts to the Dark River by operation of the SCRS, for MPCA review and approval. The Regulated Party shall implement the approved mitigation project and schedule upon receipt of written notification from the MPCA that the SCRS has caused adverse impacts to the Dark River.

iii. The Regulated Party may, after one or more years of operation of the SCRS, request a meeting with DNR and MPCA staff to discuss the available Dark River monitoring data and SCRS seepage collection data. The purpose of the meeting will be to reassess whether or not the SCRS has adversely impacted the Dark River. If a reassessment by MPCA staff determines there has not been an adverse impact to the Dark River resulting from operation of the SCRS, then implementation of the approved augmentation or mitigation options shall not be required and monitoring of the Dark River shall be terminated upon written notification of such by the MPCA.

Tailings Basin Water Quality

jjj. Within 60 days of the effective date of this Agreement, the Regulated Party shall submit a Monitoring Well Installation Plan (Installation Plan) and schedule for installation for MPCA review and approval. The Installation Plan shall identify monitoring wells that will be installed to: 1) refine a groundwater model for sulfate transport, and 2) monitor compliance with the sulfate groundwater standard at the current property boundary. Current property boundary means the Regulated Party's property boundary around the tailings basin that is present on the effective date of this Agreement. The Installation Plan shall also identify the chemical parameters that will be monitored and the frequency of monitoring ground water elevation and chemical parameters. Within 30 days of MPCA review and approval of the Installation Plan the Regulated Party shall install the additional monitoring wells, if field conditions permit. If field conditions do not allow installation within 30 days of MPCA approval of the Installation Plan, the Regulated Party shall notify MPCA and provide an estimated schedule for installation of

monitoring wells at the earliest practical opportunity that field conditions permit, for MPCA approval.

kkk. Within 60 days of the effective date of this Agreement, the Regulated Party shall submit a conceptual groundwater model (Conceptual Model), for MPCA review and approval. The Conceptual Model shall contain a discussion of the characteristics of the aquifer and the overall objectives and underlying assumptions of the groundwater model that will be used to predict sulfate transport from the tailings basin and further described in Part 7.nnn.

lll. Within 30 days of installation of the monitoring wells, the Regulated Party shall submit a Monitoring Well Installation Report (Installation Report). The Installation Report shall include, but is not limited to, a detailed monitoring well log for each monitoring well installed, unique well number for each well, surveyed top of casing elevations for each well, and a digital image (e.g., aerial photograph) identifying the location of the wells in relation to the tailings basin and property boundary.

mmm. Within 90 days of submission of the Installation Report, the Regulated Party shall begin to provide written updates to MPCA regarding the status of the groundwater modeling efforts every six calendar months, at a minimum. The updates shall include all groundwater monitoring information available since installation of the monitoring wells.

nnn. The Regulated Party will incorporate the data gathered from installed monitoring wells into the ground water model of sulfate transport and revise the modeling assumptions in order to accurately model the monitored data. Within 210 days of submission of the Installation Report, the Regulated Party will determine what sulfate concentrations are necessary in the tailings basin to ensure compliance with the groundwater standard at the current property boundary (target concentration). If the Regulated Party is unable to provide a target concentration MPCA staff shall develop a target concentration based on a model of sulfate transport, using available monitoring information and well logs provided by the Regulated Party. If the Regulated Party disputes that the MPCA model does not adequately predict the quality of groundwater outside of the Regulated Party's tailings basin, the Regulated Party may pursue resolution of this dispute through the steps described in Part 11 of this Agreement.

ooo. If ground water monitoring results show non-compliance with the groundwater sulfate standard at the property boundary, the Regulated Party shall, within five days of this determination notify the MPCA. In response, the, MPCA may take action in accordance with Part 23 of the Agreement.

ppp. Within 180 days after the effective date of this Agreement the Regulated Party shall provide an Alternate Makeup Water Report (Makeup Water Report) to the MPCA, for review and approval. The Makeup Water Report shall: (1) provide an evaluation of possible sources of makeup water that would have a lower sulfate concentration than the present makeup water supply, (2) evaluate whether the alternative source would be used instead of or in combination with the present makeup water supply for facility operation to reduce sulfate loading to the tailings basin, and (3) provide a schedule for the construction necessary to utilize the alternate makeup water source. Implementation of the schedule would be triggered upon detection of a violation of the sulfate standard at the property boundary.

qqq. Within 210 days of this Agreement, the Regulated Party shall submit to MPCA a Dry Controls Effectiveness Report (Effectiveness Report) that indicates projections of sulfate concentration in the tailings basin from the date of the report extending to five years after completion of the final dry control project, for MPCA review and approval. The Effectiveness Report shall also include the target concentration, if available, as determined by any finalized modeling as described in Part 7. nnn of the Agreement. If at the time of submittal of the initial Effectiveness Report a target concentration is unavailable, the Regulated Party shall provide to the MPCA an updated Effectiveness Report within 30 days of establishment of the target concentration. If the sulfate concentration projected for the tailings basin five years after completion of the final dry control project is greater than the target concentration, the Effectiveness Report must describe what additional sulfate reduction measures shall be taken, with a schedule, to ensure the sulfate concentration projection is less than the target concentration within five years of completion of the dry air control project. The Effectiveness Report may include the use of alternative makeup water as identified in Part 7.ppp of the Agreement. The Regulated Party shall provide annual updates of the Effectiveness Report by February 1 of each year, subsequent to submission of the first Effectiveness Report. The

annual Effectiveness Reports shall provide revised projections or target concentrations based on new information, as necessary.

Part 8. ***PENALTIES FOR VIOLATIONS OF THIS AGREEMENT.***

a. If the Regulated Party fails to comply with Parts 7.d and 7.g of this Agreement, the Regulated Party shall pay to the MPCA a penalty in the amount of $1,000 per requirement for each day of failure.

b. If the Regulated Party fails to comply with requirements of Part 7.ii – Part 7.qqq of this Agreement, the Regulated Party shall be subject to penalties for each failure, as follows:

1. $500/day for failure to provide timely submittals and notifications to the MPCA, as applicable.

2. $500/day for failure to retain consultants in a timely manner, as applicable.

3. $500/day for failure to initiate construction according to schedules submitted by the Regulated Party and approved by the MPCA, as applicable.

4. $500/day for failure to initiate and complete bench and pilot scale testing according to schedules submitted by the Regulated Party and approved by the MPCA, as applicable.

5. $1,000/day for failure to complete construction and initiate operation according to schedules submitted by the Regulated Party and approved by the MPCA, as applicable.

6. Penalties for failure to comply with requirements of Part 7 of this Agreement shall accrue from the date the Regulated Party was to have fulfilled the requirement until the Regulated Party fulfills the requirement. Penalties shall not accrue while the MPCA considers a timely extension request under Part 13 or during dispute resolution under Part 11, unless the MPCA determines that the Regulated Party filed the request or initiated dispute resolution solely for purposes of delay. If the Regulated Party does not pursue dispute resolution under Part 11 for denial of a timely extension request, penalties shall accrue from the date the extension request is denied by the MPCA Case Contact. If the Regulated Party pursues dispute resolution for denial of an extension request and does not file a timely challenge in a court of competent jurisdiction as

provided by Part 11, penalties shall accrue from the date of a Commissioner's dispute resolution decision against the Regulated Party until the Regulated Party fulfills the requirement that is the subject of the extension request.

c. The Regulated Party shall pay a penalty under this Part within 30 days after receiving written notice from the MPCA that the penalty is due. The written notice shall specify the provision of the Agreement that the Regulated Party has not fulfilled and indicate the date penalties began to accrue. If the Regulated Party fails to make timely payment, the MPCA may assess and the Regulated Party agrees to pay a late payment charge, in addition to the stipulated penalty, to be assessed as follows. Forty-five days after receipt of written notice, the Regulated Party shall be obligated to pay a late charge in an amount equal to ten percent of the unpaid stipulated penalty. Sixty days after receipt of written notice, the Regulated Party shall be obligated to pay an additional late charge in an amount equal to twenty percent of the unpaid stipulated penalty.

d. In dispute resolution before the Commissioner under Part 11, the Regulated Party can contest the factual basis for the MPCA's determination that the Regulated Party has not fulfilled a requirement of this Agreement covered by this Part. However, the Regulated Party waives its right to challenge, on legal grounds, the requirement that it pay penalties under this Part.

e. The Regulated Party shall not be liable for payment of penalties for failure to comply with requirements of Part 7 of this Agreement covered by this Part if it has submitted to the MPCA a timely request for an extension of Agreement under Part 13 and the MPCA has granted the request. The MPCA's grant of an extension of schedule waives the payment of penalties covered by this Part only on the requirements for which the MPCA granted an extension of schedule and only for the time period specified by the MPCA in the grant of an extension. An extension of schedule for one requirement of Part 7 does not extend the schedule for any other requirement of Part 7.

f. Any requirement of this Agreement may be enforced as provided in Minn. Stat.§ 115.071 (2004). Payment of a stipulated penalty does not relieve the Regulated Party of its obligation to fulfill and complete requirements under the Agreement and to otherwise comply with the terms and conditions of the Agreement.

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Part 9. ***COVENANT NOT TO SUE AND RESERVATION OF REMEDIES.*** With respect to the Regulated Party, the MPCA agrees not to exercise any administrative, legal or equitable remedies available to the MPCA to address the violations alleged and described in Part 6 as long as the Regulated Party performs according to and has complied with the terms and conditions contained in this Agreement. The MPCA reserves the right to enforce this Agreement or take any action authorized by law, if the Regulated Party fails to comply with the terms and conditions of this Agreement.

Further, the MPCA reserves the right to seek to enjoin violations of this Agreement and to exercise its emergency powers pursuant to Minn. Stat. § 116.11 (2004) in the event conditions or the Regulated Party's conduct warrant such action. Nothing in this Agreement shall prevent the MPCA from exercising these rights and nothing in this Agreement constitutes a waiver of these rights.

The Regulated Party agrees to waive all claims it may now have, as of the effective date of this Agreement, under Minn. Stat. § 15.472 for fees and expenses arising out of matters leading up to and addressed in this Agreement.

Part 10. ***REPEAT VIOLATIONS.*** Federal and state environmental programs establish harsher penalties for violations of environmental laws or rules that constitute repeat violations. In a proceeding to resolve alleged violations by the Regulated Party, if any, occurring after the date of the alleged violations set out in Part 6 of this Agreement, the Regulated Party may argue about the extent to which the violations alleged in Part 6 of this Agreement should affect the penalty amount for the later violations, but waives the right: (1) to contend that the violations alleged in Part 6 of this Agreement did not occur as alleged and (2) to require the MPCA to prove the violations alleged in Part 6 of this Agreement.

Part 11. ***RESOLUTION OF DISPUTES.*** The parties to this Agreement shall resolve disputes that arise as to any part of the Agreement as follows:

a. Either party, acting through its Case Contact (as defined in Part 14 below), may initiate dispute resolution by providing to the Case Contact of the other party an initial written statement setting forth the matter in dispute, the position of the party, and the information the party is relying upon to support its position.

The other party, acting through its Case Contact, shall provide a written statement of its position and supporting information to the case contact of the initiating party within 14 calendar days after receipt of the initial written statement.

b. If the parties, acting through their Case Contacts, do not reach a resolution of the dispute and reduce such resolution to writing in a form agreed upon by the parties within 21 calendar days after the initiating party receives the statement of position from the responding party, the Commissioner shall issue a written decision resolving the dispute. The written decision may address stipulated penalties assessed pursuant to Part 8. The Commissioner's decision shall be considered a final decision of the MPCA for purposes of judicial review.

c. The Commissioner's decision shall become an integral and enforceable part of this Agreement unless the Regulated Party timely challenges the decision in a court of competent jurisdiction. Failure to timely challenge means the Regulated Party agrees to comply with the MPCA Commissioner's decision on the matter in dispute and to pay any penalties that accrue pursuant to Part 8 for failure to fulfill requirements of this Agreement that are the subject of the dispute resolution. Further, if the Commissioner's decision assesses penalties pursuant to Part 8 of this Agreement, the Regulated Party agrees to and shall pay the amount of penalty determined by the Commissioner within 60 days after receiving the Commissioner's decision.

d. Throughout any dispute resolution, the Regulated Party shall comply with all portions of the Agreement that the MPCA determines are not in dispute.

e. Should any request, report, study, recommendation, modification, schedule or other submittal of the Regulated Party be rejected, disapproved, or otherwise denied by MPCA, the Regulated Party may invoke Dispute Resolution under this Part.

Part 12. ***VENUE.*** Actions brought by the MPCA to enforce requirements and terms of this Agreement shall be venued in Ramsey County District Court.

Part 13. ***EXTENSION OF SCHEDULES.*** If the Regulated Party wants an extension of a deadline included in a schedule set out in Part 7, the Regulated Party must request the extension in writing at least ten days before the scheduled deadline, or as soon as possible before that date if the reason for the extension request arises less than ten days before the deadline.

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Each deadline extension request shall separately specify the reason why the extension is needed. No requested extension shall be effective until approved in writing by the MPCA, acting through the MPCA Case Contact or the Commissioner.

The MPCA shall grant an extension only for the period of time the MPCA determines is reasonable under the circumstances. The written approval or grant of an extension request shall be considered an enforceable part of the Agreement.

The Regulated Party has the burden of demonstrating to the satisfaction of the MPCA that the request for the extension is timely, and that good cause exists for granting the extension. Good cause can include, but is not limited to, the following:

a. Circumstances beyond the reasonable control of the Regulated Party.

b. Delays caused by the MPCA in reviewing timely submittals required by this Agreement, the Regulated Party submitted in complete and approvable form, which make it not feasible for the Regulated Party to meet the required schedules.

Good cause does not include unanticipated costs, increases in the cost of control equipment, or delays in MPCA review of submittals when the submittals are not in complete and approvable form.

The Regulated Party may challenge a decision by the MPCA to deny a request for an extension under Part 11.

Part 14. ***CASE CONTACT.*** The MPCA and the Regulated Party shall each designate a Case Contact for the purpose of overseeing the implementation of this Agreement. The MPCA Case Contact for air quality issues is Suzanne Bauman; the MPCA Case Contact for water quality issues is John Thomas. The Regulated Party's Case Contact is Chrissy Bartovich. Either party may change its designated Case Contact by notifying the other party in writing, within five days of the change. To the extent possible, communications between the Regulated Party and the MPCA concerning the terms and conditions of this Agreement shall be directed through the Case Contacts. The address and telephone number for Suzanne Bauman is MPCA, Industrial Division-5, 520 Lafayette Rd N, St Paul MN 55155, and (651)757-2798. The address and telephone number for John Thomas is MPCA, 525 S. Lake Avenue, Suite 400, Duluth, MN 55802 and (218)302-6616.

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Part 15. ***REGULATED PARTY INFORMATION.*** The Regulated Party shall not knowingly make any false statement, representation or certification in any record, report, plan or other document filed or required to be submitted to the MPCA under this Agreement. The Regulated Party shall immediately upon discovery report to the MPCA any errors in such record, report, plan or other document.

Part 16. ***REVIEW OF SUBMITTALS.*** The MPCA, acting through its Commissioner, Case Contact, or other designated MPCA staff, shall review all submittals made by the Regulated Party as required by this Agreement and shall notify the Regulated Party in writing of the approval or disapproval of each submittal, if applicable. The MPCA and the Regulated Party shall consult with each other upon the request of either party during the review of submittals or modifications. If any submittal is disapproved in whole or in part, the MPCA Commissioner or designated MPCA staff shall notify the Regulated Party of the specific inadequacies and shall indicate the necessary amendments or reviews. Within 15 calendar days after receipt of any notice of disapproval, the Regulated Party shall submit revisions and take actions to correct the inadequacies.

Part 17. ***ACCESS.*** During the term of this Agreement, the Regulated Party agrees to provide the MPCA and its staff access to the Keetac and Minntac facilities and its records and documents related to the implementation of this Agreement to the extent provided under Minn. Stat. § 116.091 (2004) or other law, conditioned only upon the presentation of credentials. The Regulated Party and MPCA shall comply with Minn. Stat. § 116.075 and Minnesota Rule 7000.1300 regarding any such information that is confidential and not public.

Part 18. ***SAMPLING AND DATA AVAILABILITY.*** The Regulated Party shall make available to the MPCA the results of any sampling, tests, or other data generated by the Regulated Party, or on its behalf, to implement the requirements of this Agreement.

Part 19. ***RETENTION OF RECORDS.*** The Regulated Party shall retain in its possession all records, documents, reports and data related to this Agreement.

The Regulated Party shall preserve these records, documents, reports and data for a minimum of three years after the termination of this Agreement despite any document retention policy of the Regulated Party to the contrary, and shall promptly make all such documentation available for review upon request by the MPCA.

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Part 20. ***APPLICABLE LAWS AND PERMITS.*** The Regulated Party shall undertake all actions required to be taken pursuant to this Agreement in accordance with the requirements of all applicable state and federal laws and regulations. Except when the MPCA has specified and authorized a different compliance method in Part 7, the Regulated Party must also comply with all applicable permits, orders, stipulation Schedules and schedules of compliance. Nothing in this Schedule exempts or relieves the Regulated Party of its obligation to comply with local governmental requirements.

Part 21. ***LIABILITIES.*** Each party agrees that it will be responsible for its own acts and the results thereof to the extent authorized by law and shall not be responsible for the acts of the other party and the results thereof. The State's liability shall be governed by the provisions of the Minnesota Tort Claims Act, Minn. Stat, §§ 3.732, et seq., and other applicable law.

Part 22. ***OTHER CLAIMS.*** Nothing herein shall release the Regulated Party from any claims, causes of action or demands in law or equity by any person, firm, partnership or corporation not a signatory to this Agreement for any liability it may have arising out of or relating to the release of any pollutant or contaminant from its operations or from a facility. Neither the Regulated Party nor the MPCA shall be held as a party to any contract entered into by the other party to implement the requirements of this Schedule.

Part 23. ***RESERVATION OF REMEDIES.*** Nothing in this Schedule shall prevent the MPCA from taking action to enforce the requirements of this Schedule including issuance of administrative orders, or from requiring additional action by the Regulated Party if necessary to ensure compliance with this Schedule. In addition, the issuance of this Schedule is not an exclusive action or remedy by the MPCA, and except as provided in Part 9 of this Agreement, it does not limit in any way the MPCA's authority to bring an enforcement action against or to seek and collect penalties from the Regulated Party for violations of state and federal environmental laws, rules and permits. Further, the MPCA reserves the right to exercise its emergency powers pursuant to Minn. Stat. § 116.11 (2008) in the event conditions or the Regulated Party's conduct warrants such action.

Part 24. ***SUCCESSORS, AGENTS AND CONTRACTORS.*** This Agreement shall be binding upon the Regulated Party and its successors and assigns and upon the MPCA, its

successors and assigns. If the Regulated Party sells or otherwise conveys or assigns any of its right, title or interest in the Facility, the conveyance shall not release the Regulated Party from any obligation imposed by this Schedule, unless the party to whom the right, title or interest has been transferred or assigned agrees in writing to fulfill the obligations of this Agreement and the MPCA approves the transfer or assignment. The Regulated Party shall ensure that the Regulated Party's agents, contractors and subsidiaries comply with the terms and conditions of this Agreement.

Part 25. ***AMENDMENTS.*** Except with respect to extensions of schedules granted under Part 13 and approved submittals under Part 16, this Agreement may be amended only by written agreement between the parties.

Part 26. ***EFFECTIVE DATE.*** Except with respect to Parts 7.o through 7.gg, the Mercury Air Emissions Reduction Requirements and the Mercury Air Emissions Reduction Contingency Conditions, this Agreement shall be effective on the date it is signed by the MPCA.

The Mercury Air Emissions Reduction Requirements and the Mercury Air Emissions Reduction Contingency Conditions are effective upon issuance of an effective Keetac Permit No. 13700063-004 or the last party signature, whichever is later. In no event will these parts of the Agreement be effective unless the MPCA has issued the Keetac Permit No. 13700063-004 and such Permit is in effect.

Part 27. ***TERMINATION.***

a. Each requirement of this Agreement shall terminate, in whole or in part, if each of the following are met:

1. The Regulated Party has completed and complied with the provisions contained in the Agreement for the Requirement for which termination is sought;

2. The Regulated Party has paid any stipulated penalties due and owing to MCPA associated with the Requirement for which termination is sought.

3. The Regulated Party submits a written request to MPCA indicating that it has completed and complied with the Requirement for which termination is sought; and

4. MPCA, within 60-days of receiving a request from the Regulated Party, has not contested in writing that such compliance with the Requirement has been

achieved. If MPCA disputes the Regulated Party's compliance and completion with the Requirement for which termination is sought, MPCA shall provide written notice to the Regulated Party within 60-days of the date of receipt of the request and the Dispute Resolution Provisions of Part 11 of this Agreement shall be invoked and the Requirement shall remain in effect for that Requirement for which termination is sought pending the resolution of the dispute by the parties, Commissioner or Court.

b. If by December 31, 2018, the State of Minnesota has not initiated action to establish an enforceable schedule for installing mercury control technology at the six existing taconite facilities, Parts 7.o through 7.gg of the Agreement shall be terminated if such Parts have not already been terminated pursuant to Part 27.a, above.

c. If MPCA determines that termination of any provision of this Agreement is appropriate without receiving a written notification by the Regulated Party pursuant to paragraph (a) above, such provision of this Agreement shall be deemed satisfied and terminated when the Regulated Party receives written notification from the MPCA that the Regulated Party has demonstrated, to the satisfaction of MPCA, that the term(s) of the Agreement have been completed. Should the Regulated Party dispute MPCA's determination that such provision is terminated, the Regulated Party may invoke Dispute Resolution under Part 11 of this Agreement.

Part 28. ***SURVIVAL.*** The provisions of Parts 2, 9, 10, 15, 18, 19, 20, 21, 22, 24, and 28 of this Agreement and the rights, duties and obligations of the MPCA and the Regulated Party created in those provisions shall survive termination of this Agreement.

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BY THEIR SIGNATURES BELOW, THE UNDERSIGNED REPRESENT THAT THEY HAVE AUTHORITY TO BIND THE PARTIES THEY REPRESENT

UNITED STATES STEEL CORPORATION

By: MS Williams

Michael S. Williams
Sr. VP – North America Flat Roll Ops.
United States Steel Corporation

Date: 6-7-11

STATE OF MINNESOTA POLLUTION CONTROL AGENCY

By: Ann Foss

Ann Foss, Director
Strategic Projects Sector
Industrial Division

Date: 6-9-11

APPENDIX A

Graphical Representation of Mercury Emission Reductions

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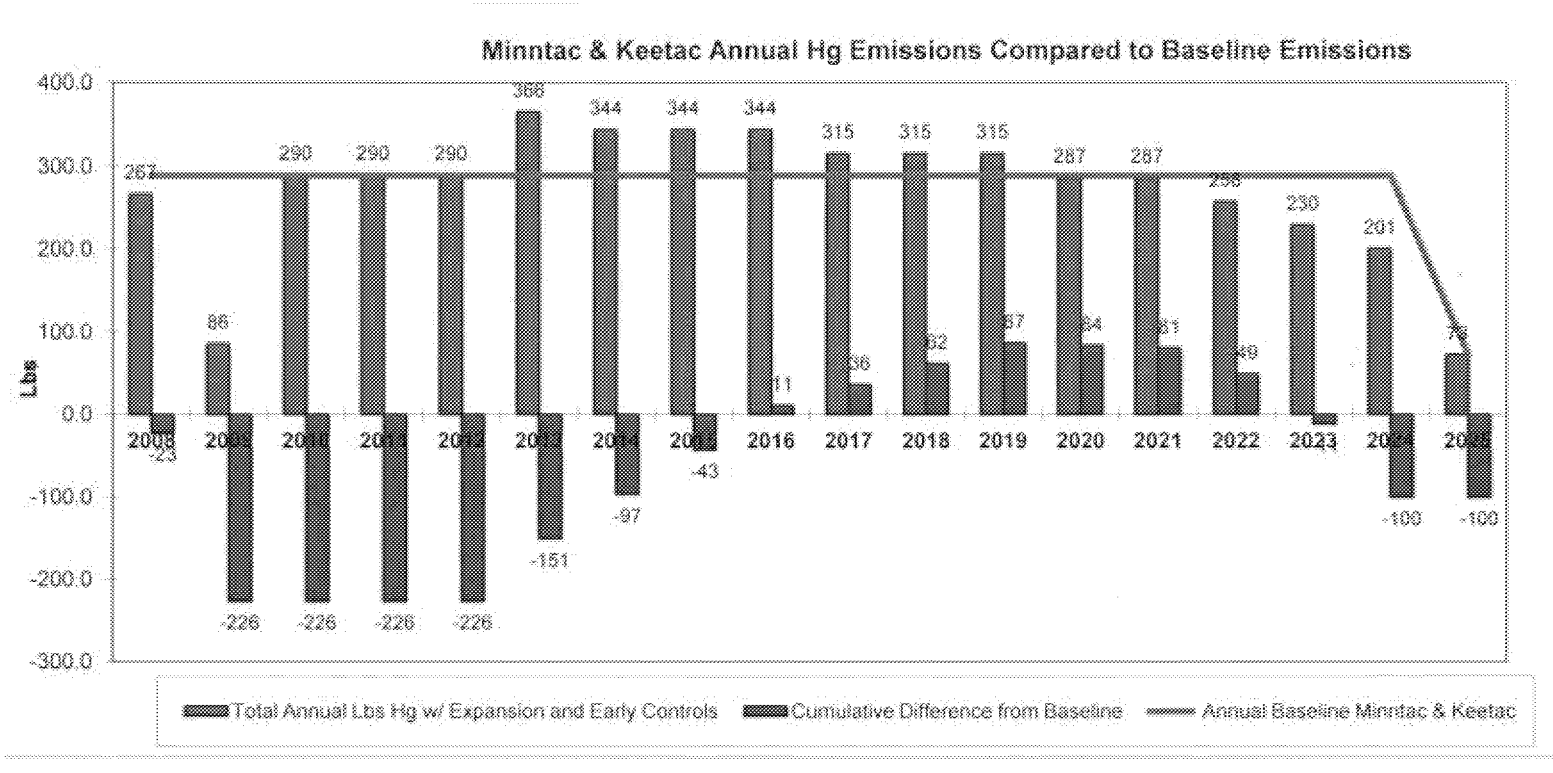
Minntac & Keetac Annual Hg Emissions Compared to Baseline Emissions
Lbs
400.0
300.0
200.0
100.0
0.0
-100.0
-200.0
-300.0
2016
2017
2018
2019
2020
2021
2022
2023
Total Annual Lbs Hg w/ Expansion and Early Controls
Cumulative Difference from Baseline
Annual Baseline Minntac & Keetac