



Minnesota Pollution Control Agency

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October 2, 2012

TO: INTERESTED PARTIES

RE: Northern Metals

On October 1, 2012, the Minnesota Pollution Control Agency Citizens' Board voted to approve the Findings of Fact, Conclusions of Law, and Order for a Negative Declaration on the need for an Environmental Impact Statement for the proposed Northern Metals Application for Major Permit Amendment, Hennepin County. The Findings of Fact, Conclusions of Law, and Order document concludes that the project does not have the potential for significant environmental effects. This decision for a Negative Declaration completes the state environmental review process under the revised Minnesota Environmental Quality Board Rules, Minn. R. ch. 4410. Final governmental actions on the granting of permits and approvals for the project may now be made.

These documents can be reviewed at the following locations: the MPCA offices in St. Paul; the Minneapolis Public Library at 300 Nicollet Mall, Minneapolis; and the North Regional Community Library at 1315 Lowry Avenue Northeast, Minneapolis. The document can be viewed on our MPCA website at <http://www.pca.state.mn.us/news/eaw/index.html>. Requests for copies of these documents may be made by contacting the St. Paul office at 651-757-2101.

We appreciate the time and effort of those who submitted comments on the Environmental Assessment Worksheet. Comments and responses to them have been incorporated into the Findings of Fact, Conclusions of Law, and Order and have been considered by MPCA staff during the permit process for the proposed project.

Sincerely,

A handwritten signature in black ink, appearing to read "John Linc Stine".

John Linc Stine
Commissioner

JLS:mbo

**STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY**

**IN THE MATTER OF THE DECISION
ON THE NEED FOR AN ENVIRONMENTAL
IMPACT STATEMENT FOR THE PROPOSED
NORTHERN METALS APPLICATION FOR MAJOR PERMIT AMENDMENT
MINNEAPOLIS, MINNESOTA**

**FINDINGS OF FACT
CONCLUSIONS OF LAW
AND ORDER**

FINDINGS OF FACT

The above-entitled matter came before the Minnesota Pollution Control Agency (MPCA) Citizens' Board (Board) at a special Board meeting held in St. Paul, Minnesota, on October 1, 2012. Based on MPCA staff review, comments and information received during the comment period, and other information in the record of the MPCA, the MPCA hereby makes the following Findings of Fact, Conclusions of Law, and Order.

Project Description

1. Northern Metals, LLC ("Northern Metals") operates a metal recycling facility ("Facility") at 2800 Pacific Street North Minneapolis, Minnesota. A predecessor company, American Iron and Supply, Inc., ("American Iron") began metal recycling operations on the site in 1951. Northern Metals purchased the facility in 2006.
2. In 1995, American Iron proposed to install and operate a Kondirator metal shredder at the Pacific Street facility.
3. An Environmental Assessment Worksheet ("EAW") and a Human Health and Ecological Risk Assessment were prepared on the Kondirator proposal in 1995 pursuant to Minn. Stat. § 116G.151. The Kondirator EAW was completed on October 9, 1995. The EAW process led to a negative declaration on the need for an Environmental Impact Statement ("EIS").
4. In 1996, American Iron applied for an Air Emissions Permit to install and operate the Kondirator metal shredder at the site. Upon completion of subsequent litigation, a non-expiring Air Emission Permit was issued to American Iron on December 8, 1998; however, the Kondirator shredder was never installed.
5. After Northern Metals purchased the site from American Iron, Northern Metals installed and placed into operation a Metso (not Kondirator) metal shredder under the Air Emissions Permit Northern Metals assumed from American Iron when it purchased the metals recycling Facility in 2006. The Metso shredder commenced operation on June 18, 2009.
6. The Air Emission Permit required that, upon placing the shredder into operation, stack emission testing must be performed to demonstrate compliance with permit limits. This testing was conducted from December 1-4, 2009.

7. The test results Northern Metals reported showed that stack emissions for total particulate matter (PM), particulate matter less than 10 microns in diameter (PM₁₀) and mercury were out of compliance with the permit by 204 percent, 258 percent, and 32 percent, respectively. Re-testing for PM and PM₁₀ conducted on December 22, 2009, indicated continued non-compliance for total PM and PM₁₀ by 102 percent and 207 percent, respectively. Additional stack testing for mercury emissions conducted on June 22, 23, and 29, 2010, showed compliance with the mercury limit.
8. An enforcement action ensued and was resolved with a Stipulation Agreement that became effective on August 11, 2010. The Stipulation Agreement required Northern Metals to submit a Compliance Plan to the MPCA for approval, which Northern Metals did. Among other things, the Compliance Plan specified that Northern Metals would submit an application for an amendment to its permit with a 1.83 lb/hr limit for all regulated forms of PM, including particulate matter less than 2.5 microns in size (PM_{2.5}). A PM_{2.5} limit had not been included in the original 1998 Air Emissions Permit.
9. The project under review is the application for a major air emission permit amendment submitted by Northern Metals on August 30, 2010 and supplemented on October 6, 2011. The application included changes the company believed were warranted based on the stack test results and its operational experience as well as new emission limits for mercury, total PM, PM₁₀ and PM_{2.5}. The proposed changes relate to permit limits and operational changes only, and do not include provisions for any new construction. The proposed operational changes also remove restrictions related to the processing of stainless steel, aluminum, brass and copper, and remove the current prohibition on the processing of auto hulks.
10. An EAW was prepared on the proposed major permit amendment. The MPCA is the responsible governmental unit (RGU) for the environmental review of the Project.

Procedural History

11. Northern Metals submitted the completed data portion of an EAW on November 30, 2010. This submittal was used by MPCA staff as the first step in preparing an EAW on the permit amendment proposal. The EAW contains more information on the proposal and its potential for significant environmental effects.
12. On November 10, 2011, before the beginning of the EAW comment period, the MPCA sent a letter to all names on the mailing list for the 1995 Kondirator EAW, indicating that an EAW on the proposed Northern Metals permit amendment was being prepared and providing information on how to obtain a paper copy of the EAW or access an electronic copy on the MPCA website.
13. MPCA staff prepared an EAW on the proposed Project.
14. On November 14, 2011, the EAW was distributed to the Environmental Quality Board (EQB) mailing list and other interested parties, pursuant to Minn. R. 4410.1500.

15. The MPCA published a notice of the availability of the EAW in the *EQB Monitor* on November 14, 2011. In addition to the EAW, MPCA placed the draft MPCA air emissions permit on notice concurrently with the EAW.
16. MPCA made the EAW available for review on the MPCA website at <http://www.pca.state.mn.us/news/eaw/index.html>.
17. MPCA provided a news release to media in the Twin Cities Metropolitan Area, as well as other interested parties, on November 14, 2011.
18. The public comment period for the EAW began on November 14, 2011 and ended on December 14, 2011. A number of citizens requested a public informational meeting, which requires at least 30 days advance notice for a meeting on an air emissions permit. Minn. R. 7007.0850, subp. 2(3).
19. The EQB rules also provide for public meetings on an EAW if such a meeting is necessary or useful. Minn. R. 4410.1600. Reasonable advance notice is required.
20. The MPCA staff determined that a public informational meeting would be useful to help clarify and resolve issues concerning the EAW and proposed permit.
21. On January 6, 2012, the MPCA issued a public notice announcing a public informational meeting for February 14, 2012, and an extension of the comment period beginning on January 13, 2012, and ending on February 28, 2012. Upon due consideration, the MPCA decided to change the date of the public meeting to February 28, 2012, to accommodate community needs.
22. On January 23, 2012, the MPCA published a notice in the *EQB Monitor* stating that the comment period for the EAW and the draft permit amendment had been re-opened, that a public meeting would be held on February 28, 2012, and that the comment period would end on March 14, 2012, two weeks after the public meeting. The meeting was also intended to provide an additional opportunity for the public to submit written comments.
23. In early February, 2012, MPCA staff determined that the 4.2 lb/hr PM limits specified in the draft permit amendment had the unintended effect of relaxing the emission limit from the 1.83 lb/hr limit that had been included in settlement of the enforcement action described in the Project Description section above.
24. MPCA staff also re-ran the air dispersion modeling that Northern Metals had done for the facility to show modeled compliance with National Ambient Air Quality Standards (NAAQS). Northern Metals did the modeling in support of its submittal of a March 2010 permit application, and did it again to support the revised application submitted in August 2010. The air dispersion modeling was based on ambient air background concentration data that by February, 2012, was outdated. Updated ambient air background concentration data had become available in January, 2012.
25. The MPCA finds that in light of the fact that MPCA staff was considering a change to the PM limits to from 4.2 lb/hr to 1.83 lb/hour and the availability of updated ambient air background concentration data, it was appropriate for MPCA staff to model the facility emissions for particulate matter again.

26. MPCA staff updated the background concentration input data before rerunning the NAAQS modeling. MPCA staff modeling with the updated background data at 4.2 lb/hr showed that the facility would exceed the 24-hour NAAQS for PM_{2.5} by a wide margin.
27. MPCA staff then ran an air dispersion model at 1.83 lb/hr. This modeling exercise showed compliance with the 24-hour PM_{2.5} NAAQS at 34.3 µg/m³ (micrograms per cubic meter), which is 0.7 µg/m³ below the NAAQS.
28. MPCA staff concluded that changing the particulate matter emission limits in the proposed permit to 1.83 lb/hr would be the most appropriate thing to do under the circumstances.
29. Under guidance pertaining to EQB Rules, if an RGU determines that important information in an EAW is either so incomplete or so inaccurate that the Project commenters have not been given a fair chance to review the true Project, the RGU may withdraw the EAW, revise it and republish it. *EAW Guidelines: Preparing Environmental Assessment Worksheets*, Environmental Quality Board, page 4, (May 12, 2010). Given the significant change in the particulate matter limits from 4.2 lb/hr to 1.83 lb/hr, MPCA staff decided to revise the EAW and republish it in this case.
30. On February 20, 2012, the MPCA published a notice in the *EQB Monitor* of the Commissioner's decision to revise the draft permit and issue a revised EAW on the Project. This notice also announced the decision to close the comment period that was to end on March 14, 2012.
31. On February 21, 2012, MPCA staff published a second public notice to end the public comment period and postpone the public informational meeting in order to revise the EAW and permit amendment and put them back on public notice with revised particulate matter emission limits.
32. The MPCA finds that it was appropriate to revise the particulate matter emission limits and to revise and republish the EAW accordingly, as a result.
33. MPCA staff and Northern Metals were unable to agree on revisions to the EAW and permit amendment to include 1.83 lb/hr PM limits and to a schedule to put the revised EAW and permit on public notice.
34. On February 24, 2012, Northern Metals filed a Petition for a Peremptory Writ of Mandamus in Ramsey County District Court. Northern Metals based its petition on Minn. Stat. § 116D.04, subd. 2a(b) and Minn. R. 4410.1700, subp. 2.A., which call for an RGU, in this case the MPCA, to make its final decision on the need for an EIS between three and thirty days after the close of the public comment period on the EAW. No consequence is specified for failure to meet the timing in the rule.
35. In its Petition, Northern Metals argued that it was entitled to a decision on the need for an EIS at the January 2012, MPCA Board meeting because the EAW and permit amendment came off public notice on December 14, 2011, and the EQB rules make no provision for extended comment periods. Northern Metals also argued that it was entitled to automatic damages and claimed that it was losing as much as \$2 million dollars a month in revenues as a result of MPCA's failure to make a timely EIS-need decision.

36. The Court held a hearing on the Petition for the Peremptory Writ of Mandamus on February 24, 2012. Neither the MPCA nor the Commissioner was served with the Petition for the Peremptory Writ of Mandamus and neither was given notice of the February 24, 2012, hearing. The hearing proceeded without the MPCA's knowledge or participation.
37. The Court issued the Writ on February 24, 2012. The Writ ordered the MPCA to make its final decision on the need for an EIS at its March 27, 2012, MPCA Board meeting and to make its final decision on the Air Emissions Permit no later than 90 days following the March 27, 2012, decision. Due to the Peremptory Writ of Mandamus, MPCA staff was unable to revise the EAW and draft permit amendment and to re-publish the EAW for further public comment on the changed permit conditions.
38. As directed by the Court, MPCA staff brought the EAW to the Board for discussion on March 26, 2012, and for a final decision on the need for an EIS, with the 4.2 lb/hr PM emission limit. MPCA staff recommended that the MPCA Board issue a positive declaration on the need for an EIS on the basis that the Facility could not model attainment with the PM_{2.5} NAAQS at the proposed 4.2 lb/hr PM emission limit.
39. On March 26, 2012, the MPCA staff brought the recommendation for a positive declaration on the need for an EIS to the MPCA Citizens' Board for discussion. The MPCA Board agenda provided that the final decision would be made on March 27, 2012, in accordance with the Peremptory Writ of Mandamus.
40. During the course of the Board Meeting of March 26, 2012, Ramsey County District Court issued an order that stayed all administrative action on the Northern Metals matter and stayed enforcement of the Peremptory Writ. The MPCA finds that as a result of the March 26, 2012, District Court order, MPCA staff was prohibited from conducting further work on the Northern Metals EAW and permit and the MPCA Board was prohibited from considering the EAW and making its final decision on the need for an EIS on March 27, 2012.
41. The MPCA finds that it was prepared to make its final decision on the need for an EIS at its March 27, 2012, meeting except for issuance of the District Court's Stay Order.
42. On June 19, 2012, pursuant to a motion by the MPCA, the District Court vacated its March 26, 2012, stay order. The June 19, 2012, order requires the MPCA to make its final EIS decision as soon as administratively possible.
43. Since the June 19, 2012, District Court order, MPCA staff and Northern Metals worked to settle the issues regarding the Peremptory Writ of Mandamus litigation and to resolve the issues regarding Northern Metals' Air Emissions Permit.
44. MPCA staff and Northern Metals entered into a settlement agreement on September 14, 2012, that resolved the issues in the litigation and established conditions under which MPCA staff would bring both the EAW and the Air Emissions Permit to the MPCA Board for final decisions. MPCA staff and Northern Metals filed a Stipulation for Dismissal with Prejudice in the Ramsey County District Court on September 17, 2012.

45. The MPCA finds that it was appropriate for MPCA staff to settle the litigation and the issues concerned with the Air Emissions Permit to reduce the time and expense that would result from a continued dispute.
46. On July 23, 2012, consistent with the Court's order, the MPCA published a notice in the *EQB Monitor* stating that a public meeting on the EAW would be conducted on August 9, 2012. The notice also stated that the EAW comment period was being reopened and extended to September 10, 2012. The purpose of the meeting was to provide an update on the status of the EAW and to provide further opportunity for the public to submit written comments.
47. The public meeting was held as scheduled on August 9, 2012.
48. On September 7, 2012, MPCA published a notice that there would be an additional community informational meeting on September 25, 2012. The same notice announced that the Northern Metals matter would go before the Board for an EIS-need decision on October 1, 2012.
49. During the announced comment periods, the MPCA received 184 comment letters and emails from citizens, units of government, and Northern Metals. A list of the comment letters and emails received are Appendix A to these Findings. Copies of the comment letters are Appendix B to these Findings.
50. The MPCA prepared written responses to the comments. The comments and the responses to the comments are Appendix C to these Findings.

Criteria for Determining the Potential for Significant Environmental Effects

51. Under Minn. R. 4410.1700, the MPCA must order an EIS for projects that have the potential for significant environmental effects. In deciding whether a project has the potential for significant environmental effects, the MPCA must compare the impacts that may be reasonably expected to occur from the project with the criteria set forth in Minn. R. 4410.1700, subp. 7. These criteria are:
 - A. Type, extent, and reversibility of environmental effects.
 - B. Cumulative potential effects. The responsible governmental unit (RGU) shall consider the following factors: whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect; and the efforts of the proposer to minimize the contribution from the project.
 - C. The extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority. The RGU may rely only on mitigation measures that are specific and that can be reasonably expected to effectively mitigate the identified environmental impacts of the project.

- D. The extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs.

**The MPCA Findings with Respect to Each of These Criteria
Are Set Forth Below**

Type, Extent, and Reversibility of Environmental Effects

52. The first criterion that the MPCA must consider when determining if a project has the potential for significant environmental effects is the “type, extent, and reversibility of environmental effects” Minn. R. 4410.1700, subp. 7. A. The MPCA findings with respect to this criterion are set forth below.
53. The types of impacts that may reasonably be expected to occur from the Project include the following:
- air quality impacts related to particulate emissions from shredder operations
 - human health impacts related to emissions of toxic air pollutants from the shredder and the effect of lowering the PM_{2.5} limit on the AERA results
 - human health impacts related to emissions of mercury emissions from the shredder
 - noise
54. Comment letters raised additional issues, as follows:
- general air quality concerns including the compatibility of the proposal with various management plans, including the National Park Service (“NPS”) Mississippi National River and Recreation Area Comprehensive Management Plan, and the Above the Falls land use plan and other relevant plans prepared by the city of Minneapolis
 - policy implications of relaxation of permit limitations as a means of resolving noncompliance issues
 - company concerns that more stringent permit terms and conditions are required at its Pacific Street Yard than at any other shredder facility in the state
55. With respect to the extent and reversibility of impacts that are reasonably expected to occur from the Project, the MPCA makes the following findings.

Air quality impacts related to particulate emissions from shredder operations

56. The initial air emissions permit, issued in 1998, limited PM and PM₁₀ emissions to a rate of 0.43 pounds per hour. This limit was based on the need determined by MPCA to limit particulate emissions in order to keep human health risks below the facility benchmark level. This determination was based on the Human Health Risk Assessment prepared by MPCA in 1995, and it led the company to seek air emission control equipment that would limit particulate emissions to below 0.49 pounds per hour in order to limit risk driver emissions. The company found a vendor that would guarantee sufficient particulate control to keep emissions below that level when combined with other equipment that the company was already committed to install. With all this air emission control equipment deployed, calculations showed that the emission rate would be 0.43 pounds per hour. This became the limit in the permit issued in 1998.

57. At the time of the MPCA's original environmental review and risk assessment in 1995, the impact assessment did not take condensable particulate matter into consideration. However, by the time the air emission permit was issued in 1998, the EPA had made it clear that condensable particulate matter should be considered in permitting. The 1998 permit identified the particulate matter limits as including both filterable and condensable species of the pollutant.
58. When the company tested the shredder emissions in late 2009, as required by its operating permit, it found that particulates (PM and PM₁₀, including condensables, as the permit required) were being emitted at the rate of 1.32 pounds per hour, considerably higher than its permitted emission rate of 0.43 pounds per hour. The ensuing enforcement action is described in Finding 8 above.
59. Many public comments expressed concerns about the proposed particulate emission limit, the metals limits, possible negative health impacts and raising emission limits as the resolution to violations identified by stack testing. Additional similar comments were also received during the reopened comment periods which ended on February 21, 2012, and September 10, 2012.
60. Sources of particulate emissions at the Northern Metals Facility include two exhaust streams, one from the metal shredder and one from the cleaning equipment system, also called the cascade system. Air emissions from each exhaust stream are controlled by high efficiency cyclones, wet scrubbers, and fabric filtration systems. The controlled emissions from the two exhaust streams vent through a single stack.
61. Storage piles, paved roads, raw material handling activity, boilers, furnaces and space heaters for building heat, two evaporators to dispose of water from air pollution control equipment, collected metal turnings oil, and welding tools are insignificant sources and not specifically regulated by the proposed permit. These sources are, however, subject to general applicable requirements listed in Appendix A to the proposed permit. The storage piles, paved roads, and raw material handling are listed in the permit to ensure that they are managed according to the Facility's fugitive dust control plan.
62. Fugitive dust emissions from raw material handling and roads at the existing Facility are less than the similar emissions from the Kondirator project proposed in 1995 because the 1995 EAW studied and an Air Emission Permit was subsequently issued for a shredder to be built outdoors with paving only around the shredder and on roads within Facility yard. The existing shredder, which began operating in 2009, is housed inside the shredder building and all but a small fraction of the Facility yard has now been paved.
63. The Permit Amendment Project is not expected to increase the quantity or composition of fugitive dust emissions. Northern Metals will be required to submit and implement a fugitive emissions control plan within 60 days of the date of permit issuance. The plan must identify all fugitive emission sources including storage piles, paved roads, truck loading and unloading, rail loading and unloading, other material transfers, primary and contingent control measures, and recordkeeping of control measures and any corrective action.
64. Air quality modeling was conducted under multiple scenarios to determine the appropriate PM₁₀ and PM_{2.5} emission rate limits for the facility. This process is described in detail in Attachment 5 "Report on Air Dispersion Modeling Techniques by MPCA Air Dispersion Modeling Staff,

July – August 2012.” The final modeling analysis, conducted by MPCA staff, was based on a proposed $PM_{2.5}$ emission rate of 1.83 lb/hr and a background concentration of $30 \mu g/m^3$. Using these parameters, it was predicted that Northern Metals would individually contribute $3.9 \mu g/m^3$ to the ambient concentration of $PM_{2.5}$ which, when added to the $30 \mu g/m^3$ background concentration, resulted in a total modeled concentration of $33.9 \mu g/m^3$. This demonstrates that the proposed Permit Amendment will comply with the 24-hr $PM_{2.5}$ NAAQS ($35 \mu g/m^3$).

65. The MPCA finds that information presented in the EAW and other information in the environmental review record, including the updated $PM_{2.5}$ air dispersion modeling is adequate to evaluate impacts on air quality that are reasonably expected to occur from the proposed permit amendment. The information has been considered during the review process.
66. Air quality impacts related to particulate emissions from shredder operations are not reversible, as the emissions will continue as long as the shredder operates.
67. The NAAQS are “applicable requirements” under Minn. R. 7007.0100, subp. 7 that must be included in and met by any permit issued by the state of Minnesota. An emission rate that models compliance with a NAAQS is an appropriate basis for determining the potential for significant environmental effect.
68. The MPCA finds that the proposed Major Permit Amendment, with its 1.83 lbs/hr PM limit, does not have the potential for significant environmental effects based on the type, extent and reversibility of air quality impacts that are reasonably expected to occur from the proposed Project.

Human health impacts related to toxic air pollutants from the shredder and the effect of lowering the $PM_{2.5}$ limit on the AERA results

69. Among the permit changes proposed by Northern Metals is the elimination of the ban on shredding scrap motor vehicles (“auto hulks”). The company is currently allowed to shred auto parts, such as fenders, hoods, and bumpers, but the current permit prohibits the shredding of whole auto hulks.
70. The shredding of auto hulks has the potential to result in dioxin, furan, and polychlorinated biphenyls (PCB) emissions. All are known carcinogens (cancer-causing substances). These emissions could result from the shredding of chlorinated materials, such as plastics, and padding materials, in presence of metals and heat, which is more likely to occur with shredding whole auto hulks than with the separate auto parts currently allowed to be shredded.
71. Also among the permit changes sought by Northern Metals are elevated limits on certain Hazardous Air Pollutants (HAPs), mostly metals, and the removal of restrictions on the percent of aluminum, brass, copper, and stainless steel scrap that can be shredded.
72. As noted above, MPCA staff prepared an Air Emission Risk Analysis (AERA) based on these proposed permit changes and using updated data and risk assessment procedures. MPCA staff determined that human health risks associated with this Project are within human health risk guidelines, except for the chronic, cancer risk for an Urban Gardener scenario near the fence line.

73. The urban gardener scenario assumes that an individual lives at a constant location for 70 years, and during that time inhales pollutants, incidentally ingests soil (0.7 grams per week) from that location and eats home grown produce (1.4 pounds per week) and seven eggs per week produced by chickens living at that location.
74. Urban farming is a growing occupation and avocation in the city of Minneapolis and is encouraged by the city. This includes keeping chickens for egg production.
75. Under the Urban Gardener scenario, MPCA staff determined that human health risks were above risk guidelines at a location on the easterly site fence line. This led to a more refined analysis of the data, which led in turn to a finding that the area of maximum impact is an industrial area, not a residential area where urban farming could occur. The refined analysis showed that the Urban Gardener scenario was not plausible at this location given the industrial zoning along the fence line of the facility.
76. Under the Urban Gardener scenario, the AERA resulted in a determination that the human health risk from all of the carcinogens together equals, but does not exceed, the facility risk guideline at the location nearest to the shredder that could potentially be used for urban gardening, i.e., at a residential area that lies across the river.
77. With the exception of dioxins, furans and PCBs, the HAPs, taken together, contribute a small fraction toward the AERA's estimate of human health risk.
78. Dioxins, furans and PCBs stack test results showed that emissions of these pollutants were not in themselves high. Nonetheless, they contributed to the overall human health risks from the proposed Project.
79. The MPCA uses the Minnesota Department of Health negligible excess lifetime risk level of 1 in 100,000. All risk estimates were below pollutant-specific health benchmarks and combined facility risk guidelines, including acute risk estimates, except for the chronic urban gardener risks as explained above.
80. As indicated in Attachment 6, the AERA Impact Analysis Summary, the AERA was intended to consider worst case scenarios of potential facility emissions. While the AERA did not specifically quantify risks from PM_{2.5}, some of the emission estimates for pollutants in the AERA are based on a PM_{2.5} limit of 4.2 lb/hr. A description of how the emissions were calculated in the AERA can be found in Attachment 6. The AERA also shows that Dioxins/Furans/PCBs, Arsenic, and Nickel contribute the most to overall risk estimates. The other pollutant concentrations are estimated to be less than 10 percent of their respective health benchmarks.
81. Dioxins/Furans/PCBs emission estimates were not based on a PM_{2.5} limit, but rather were based on stack test results and a conservative estimate representing the worst case increase in emissions due to feedstock changes (the highest detected values or average instrument detection limit, when the pollutant was not detected, and a scalar of 1.6 to represent the potential 60 percent increase in non-metallic feedstock from processing auto hulks). Because the emission estimates for Dioxins/Furans/PCBs were not based on any assumptions about PM_{2.5}, changing the PM_{2.5} limit would not change the risk estimates from Dioxins/Furans/PCBs.

82. Arsenic and Nickel emission estimates are based on proposed permit limits. Thus changing the PM_{2.5} permit limit would also not change the risk estimates from Arsenic and Nickel.
83. Since the risk drivers are not based on PM_{2.5} assumptions, the results of the AERA included in the EAW would not change the overall risk characterization if a new PM_{2.5} limit was assumed.
84. The proposed permit amendment contains a detailed Feedstock Control Plan that describes the actions and recordkeeping for feedstock processed at the facility. The Feedstock Control Plan acts as an important element of overall emissions control system for the facility because it limits the types and amounts of materials to be processed. Northern Metals must modify the plan whenever the feedstock control practices change and must submit plan amendments to the MPCA for approval. The Plan is an enforceable part of the permit.
85. Impacts related to air toxics emissions from the shredder are not reversible, as they will be emitted as long as the shredder operates. However, with the appropriate permit limits on HAPs and PM, the AERA shows that human health effects related to these emissions do not exceed levels of concern.
86. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to address the concerns related to human health impacts from air toxics emissions from the shredder. The impacts on air quality that are reasonably expected to occur from the proposed permit amendment have been considered during the review process.
87. The MPCA finds that the proposed Major Permit Amendment does not have the potential for significant environmental effects based on the type, extent, and reversibility of human health impacts related to air toxics emissions from the shredder that are reasonably expected to occur from the Project.

Human health impacts related to mercury emissions from the shredder

88. The proposal by Northern Metals to eliminate the current prohibition on the shredding of auto hulks raises the potential for increased mercury emissions from the shredder stack. This potential arises from the use of mercury switches in automobiles and appliances.
89. The current permit limits mercury emissions to 0.00079 pounds per hour. This is the hourly equivalent of three pounds per year.
90. Based on the results of two separate stack testing events of three stack test runs and six stack test runs, Northern Metals complied with the hourly mercury emission limit in eight out of the nine of those runs.
91. The company states that it follows a mercury switch removal program on incoming scrap and state law requires mercury switch removal before auto hulk processing. Northern Metals has submitted a copy of its Feedstock Control Plan describing the procedures it follows to eliminate mercury switches in its scrap.

92. MPCA finds that the averaging of test results is the appropriate means to determine compliance with permit limits unless specified otherwise by rule or permit conditions. The averaging of mercury tests leads to the finding that the shredder is emitting mercury at 0.00053 pounds per hour, the hourly equivalent rate of about two pounds per year. This is two thirds of the current hourly equivalent rate of three pounds per year allowed by the current permit.
93. The testing demonstrates that while an occasional high value might occur, overall emissions are low, and the proposed facility limit of three pounds per year is consistent with the state's October 2009 Implementation Plan for Minnesota's Statewide Mercury Total Maximum Daily Load (TMDL) and can be met.
94. Mercury is a pollutant of both regional and global significance. Health effects of mercury arise primarily from bioaccumulation in the fish that people eat. At proposed permit amendment conditions, the shredder contributes a minimal amount to the problem of global mercury pollution.
95. The MPCA has evaluated both the short-term and long-term mercury emissions from this facility in the AERA, and determined that no significant human health risks occur at the current hourly limit equivalent of three pounds per year. The results of the AERA analysis were presented in the AERA Impact Assessment Summary, which is included as Attachment 6 of the Board Item.
96. Taken together, the above considerations lead the MPCA to find that reformatting the current hourly limit to an annual limit of three pounds per year would prevent an actual increase in the limit while measuring mercury emissions on a basis that most accurately reflects the MPCA's concerns related to mercury emissions over time. These permitting requirements are in keeping with the new and expanding source guidelines in the Mercury TMDL Implementation Plan.
97. The MPCA finds that no increase in mercury emissions is being allowed by the proposed permit amendment.
98. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to address the concerns related to mercury emission impacts. The impacts related to mercury emissions that are reasonably expected to occur from the proposed permit amendment have been considered during the review process and methods to prevent significant adverse impacts have been developed.
99. The MPCA finds that the proposed Major Permit Amendment, as mitigated by permit conditions, does not have the potential for significant environmental effects based on the type, extent, and reversibility of human health impacts related to mercury emissions that are reasonably expected to occur from the Project.

Noise

100. The shredder is located in an area of Minneapolis that is zoned for the city's heaviest industrial use. Intermittent loud noises are common in this area.

101. Chapter 7030 of Minnesota Rules addresses noise pollution control. The noise rules set limits for noise allowed during the nighttime and daytime hours. Different standards apply in different land use areas.
102. The current permit requires monitoring of noise levels at the site on an annual basis. The noise monitoring events from the past three years, conducted in accordance with the current Air Emissions Permit, found noise levels to be below the Sound Level Limit for Noise Area Class I listed in chapter 7030. This is the most restrictive noise area classification, and it includes residential areas. There is no evidence to indicate that this would change with the proposed permit amendment. The shredder throughput would remain at about current levels and hours of operation would not change.
103. The proposed permit amendment retains the requirements for annual noise monitoring, and the monitoring plan and results must be approved by the MPCA.
104. Noise impacts from shredder operation are reversible. When the shredder is shut down during non-operation periods, it contributes no noise impacts to the area in which it is located. When operating, it is subject to noise requirements in the permit, including annual testing. These assure that noise will not be produced beyond allowable limits.
105. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to address the concerns related to noise impacts. The impacts on air quality that are reasonably expected to occur from the proposed permit amendment have been considered during the review process and methods to prevent significant adverse impacts have been developed.
106. The MPCA finds that the proposed Major Permit Amendment, as mitigated by permit conditions, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts related to noise that are reasonably expected to occur from the Project.

Public comments on impacts related to general concerns including the compatibility of the proposal with various management plans, including the National Park Service (NPS) Mississippi National River and Recreation Area (MNRRA) Comprehensive Management Plan, and the Above the Falls Land Use Plan and other relevant plans prepared by the city of Minneapolis

107. The NPS expressed concerns regarding incompatibility of the proposed permit amendment with the goals of the MNRRA Comprehensive Management Plan. The NPS concerns relate primarily to whether relaxed permit limits on PM and mercury would result in increases in emissions of particulates and mercury. The issues have been addressed in previous findings in this document.
108. The city of Minneapolis has prepared three plans that deal with the river corridor in this vicinity. They are the *Above the Falls* Land Use Management Plan (2000), the Industrial Land Use and Employment Policy Plan (November 2006), and the Minneapolis Plan for Sustainable Growth (October 2009).

109. The *Minneapolis Plan for Sustainable Growth, Industrial Land Use and Employment Policy Plan*, and the *Above the Falls* plans are guides for future development rather than prescriptive documents for short-term land uses.
110. The plans recognize the existing industrial uses of the area in which the Facility is located and do not require that the uses cease.
111. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to address the concerns related to the compatibility of the proposal with various management plans, including the NPS MNRRA Comprehensive Management Plan, and the Above the Falls Land Use Plan and other relevant plans prepared by the city of Minneapolis. The impacts that are reasonably expected to occur from the proposed Project have been considered during the review process and methods to prevent significant adverse impacts have been developed.
112. The MPCA finds that the Project, as it is proposed, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts related to general concerns including the compatibility of the proposal with various management plans, including the NPS MNRRA Comprehensive Management Plan, and the Above the Falls Land Use Plan and other relevant plans prepared by the city of Minneapolis, that are reasonably expected to occur from the Project.

Public comments on impacts related to the policy implications of relaxation of permit limitations as a means of resolving noncompliance issues

113. Several comments expressed concerns and criticism that the granting of the proposed permit amendment would immediately result in significant increases in actual emissions and human health risks. These comments are based on the assumption that the granting a limit means an emission source will be emitting at that rate.
114. As outlined in findings above, the MPCA has imposed stringent emission and operating limits on the shredder. These terms and conditions have been derived using MPCA-approved air quality modeling and health risk assessment methodologies that are based on conservative assumptions regarding the types and amounts of pollutants to be generated, the manner of pollutant dispersion in the surrounding environment and their potential impact on human health. The proposed limits will assure that air quality standards will not be violated as a result of these emissions and that human health will be protected.
115. Perhaps most importantly, current actual emission levels are not expected to significantly rise due to the proposed permit amendment. The revision to the particulate limit is primarily intended to recognize the fact that condensable particulates are already being emitted from the shredder and must be included in the permitted limits.
116. The MPCA finds that information presented in the EAW and other information in the environmental review record is adequate to address the concerns related to the policy implications of relaxation of permit limitations as a means of resolving noncompliance issues.

Concerns related to the policy implications of relaxation of permit limitations as a means of resolving noncompliance issues have been considered during the review process and methods to prevent significant adverse impacts have been developed.

117. The MPCA finds that the proposal, as mitigated by permit terms and conditions, does not have the potential for significant environmental effects based on the type, extent, and reversibility of impacts related to public comments on impacts related to the policy implications of relaxation of permit limitations as a means of resolving noncompliance issues that are reasonably expected to occur from the Project.

Company concerns that more stringent permit terms and conditions are required at its Pacific Street Yard than at any other shredder facility in the State

118. Northern Metals has noted the fact that other shredders in the state are not subject to the limitations placed on its shredder, and in fact have been granted less stringent permits.
119. This situation arises, in part, from the fact that environmental review, including risk assessment, was required by the Legislature and the need to resolve an enforcement action. It was as a result of these factors that the permit was written to contain the current terms and conditions.
120. The MPCA finds that Northern Metals concern is not relevant to the decision of whether an EIS is required for its proposed Project.

Cumulative Potential Effects

121. The second criterion that the MPCA must consider when determining if a project has the potential for significant environmental effects is the "cumulative potential effects." In making this determination, the MPCA must consider "whether the cumulative potential effect is significant; whether the contribution from the project is significant when viewed in connection with other contributions to the cumulative potential effect; the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effects; and the efforts of the proposer to minimize the contributions from the project." Minn. R. 4410.1700, subp. 7.B.
122. The MPCA findings with respect to this criterion are set forth below. In the findings below, the MPCA is considering the cumulative effects of related past, present and future projects, not the individual effect of the proposed Northern Metals Permit Amendment Project on existing conditions.
123. The EAW addressed the following areas for cumulative potential effects:
- cumulative effects on air quality
 - cumulative effects on human health related to air emissions
 - cumulative effects of mercury emissions with respect to the Minnesota Statewide Total Maximum Daily Load (TMDL) for mercury

124. The EAW and public comments did not disclose any related or anticipated future projects that may interact with this Project in such a way as to result in significant cumulative potential environmental effects. Since the AERA and EAW were completed in 2011, the MPCA obtained facility specific-risk estimates from the possible Hennepin Energy Recovery Company (HERC) expansion and included that information in the AERA analysis. The updated analysis concluded that the overall AERA characterization of Northern Metals' risk does not change when considering the HERC expansion.

Cumulative effects on air quality

125. The analysis of cumulative potential air quality impacts for the environmental review identified a total of 13 facilities within a 1.5 kilometers radius from Northern Metals, plus the Xcel Energy Riverside Plant, as nearby point sources of air emissions. The majority of these facilities have registration permits, the exceptions being G & K Services, Diamond Vogel North Inc., GAF Materials Corp., Hard Chrome Inc., and the Xcel Energy Riverside Plant. Xcel Energy's Riverside Plant was once a coal-fired electric generating facility, but is now natural gas-fired. G& K Services is a dry cleaner. Diamond Vogel North Inc. is a paint and urethane manufacturer. GAF Materials Corp manufactures asphalt roofing products. Hard Chrome Inc. is an electroplating facility.
126. If modeled individually and using a $30 \mu\text{g}/\text{m}^3$ background $\text{PM}_{2.5}$ concentration, compliance with the $35 \mu\text{g}/\text{m}^3$ NAAQS for $\text{PM}_{2.5}$ is demonstrated for the proposed Northern Metals Permit Amendment Project. However, as discussed in Attachment 5, the MPCA staff modeling report, an analysis based on modeling of the 14 other individual permitted sources in the Northern Metals area resulted in a total modeled $\text{PM}_{2.5}$ concentration of $76.5 \mu\text{g}/\text{m}^3$. This level is well in excess of the NAAQS, indicating the presence of a significant cumulative effect.
127. Following the determination that the cumulative impact related to the $\text{PM}_{2.5}$ from all sources in the Project area is significant, the MPCA considered whether the contribution from Northern Metals at the proposed 1.83 pounds per hour emission rate is significant "when viewed in connection with other contributions to the cumulative potential effect viewed in connection with the contributions from other sources." Minn. R. 4410.1700, subp 7B.
128. Based on a comparison of the relative contributions of all permitted sources of particulate emissions in the area, it is concluded that Northern Metals would account for a small (two percent) but significant contribution to the total modeled concentration exceeding the $\text{PM}_{2.5}$ NAAQS.
129. After determining that the contribution of Northern Metals contribution to a cumulative effect, although small, is still significant, the MPCA considered "the degree to which the project complies with approved mitigation measures specifically designed to address the cumulative potential effect." Minn. R. 4410.1700, subp 7B. According to EQB guidelines, this factor would only apply in the Northern Metals case if the MPCA or some other governmental unit had previously developed and put into effect a plan or program whose purpose is to specifically mitigate the cumulative effect on the $\text{PM}_{2.5}$ NAAQS. There is no such plan in place for the Northern Metals Project area. However, as noted in Attachment 5, the MPCA modeling staff report, MPCA permitting staff have begun the process with other nearby sources to determine the most appropriate means for

returning the area to modeled compliance with the PM_{2.5} NAAQS. This effort will include a review of the modeling inputs from the other sources to ensure that the data is accurate and may include changes to the permits for these facilities to ensure modeled compliance. Recent communications concerning these efforts are included as Attachment 8 to the Board Item.

130. The final factor in Minn. R. 4410.1700, subp. 7B requires the MPCA to consider “the efforts of [Northern Metals] to minimize the contribution from the project.” The MPCA finds that Northern Metals has made a substantial effort to minimize its contribution by agreeing to the proposed 1.83 pounds per hour PM_{2.5} emission rate and the other provisions in the proposed Air Emissions Permit Amendment.
131. In consideration of the relatively small contribution of Northern Metals to the cumulative effect on the PM_{2.5} NAAQS and the effort made by Northern Metals to minimize its contribution of particulate emissions through the proposed Major Permit Amendment, the MPCA finds that the Permit Amendment Project does not have the potential for significant environmental effects related to cumulative effects on air quality.

Cumulative effects on human health related to air emissions

132. In order to form a more complete picture of potential cumulative health risks from inhaling outside air in the vicinity of Northern Metals, the AERA analysis incorporated monitoring data from the nearest air toxics monitoring station and facility specific risk estimates from Hard Chrome, Inc. in addition to the potential risks from Northern Metals. Of the facilities listed in Finding 125, Hard Chrome Inc. has the most similar non-criteria pollutant emissions and is the only facility for which the MPCA has air toxics modeling.
133. The cumulative inhalation risk estimates equaled risk guidelines (Hazard Index = 1) for respiratory effects and above facility risk guidelines for cancer at the fence line, as noted in earlier findings. Inhalation cancer risk estimates from ambient air monitoring data are above facility risk guidelines (1 in 100,000 excess cancer risk) throughout the state but are within the EPA's excess cancer risk goal range of 1 in 1,000,000 to 1 in 10,000. The risk estimates from the incremental changes associated with the proposed Permit Amendment Project were about four percent of the total summed cumulative inhalation cancer risk, five percent of chronic respiratory risk estimates, and nine percent of the total summed acute respiratory risk estimates. Overall risk estimates were similar to other facilities and areas in the state.

Cumulative effects of mercury emissions with respect to the Minnesota Statewide TMDL

134. MPCA staff evaluated the Project to determine whether it was in conformance with the Implementation Plan for Minnesota's Statewide Mercury TMDL. See Findings 88 – 98. This evaluation concluded that the proposed facility limit of three pounds per year is consistent with the Minnesota TMDL Implementation Plan.
135. Based on information on the Project obtained from air modeling, permit application processes, a site inspection by MPCA staff, and the staff analysis presented in the EAW, the MPCA does not expect significant cumulative effects related to toxic air emissions from the Northern Metals facility.

136. In considering the cumulative potential effects of the Project, the MPCA finds that the Project does not have the potential for significant environmental effects on human health related to air emissions.

The Extent to Which the Environmental Effects Are Subject to Mitigation by Ongoing Public Regulatory Authority

137. The third criterion that the MPCA must consider when determining if a project has the potential for significant environmental effects is "the extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority." Minn. R. 4410.1700, subp. 7.C. The MPCA findings with respect to this criterion are set forth below.
138. The following permits or approvals will be required for the Project:

| Unit of Government | Permit or Approval Required |
|--------------------|-------------------------------------|
| MPCA | Major Air Emission Permit Amendment |

139. Description of Air Permit. The proposed permit action is for a Major Amendment to the company's Individual Total Facility State Air Emissions Operating Permit. The proposed permit action revises the description of site-specific conditions to reflect changes that have been made at the facility since the previous permit was issued in 1998. The proposed permit does not authorize construction; however, it does make the following changes compared to the current operating permit.

- increase the PM and PM₁₀ limit to take into account condensable PM
- add a limit for PM_{2.5}
- add a shredder output limit of 2,400 tons/day
- remove requirements that have been completed or are obsolete: a) the requirement to pave roads and b) the requirement to record weight of all residue and material collected by the pollution control equipment
- incorporate performance test frequencies of once every 60 months for PM/PM₁₀/PM_{2.5}, mercury and opacity
- remove restrictions on the amount of aluminum, brass, copper, and stainless steel scrap that can be processed by the shredder
- modify metal emissions limits based on new information obtained through stack testing, consistent with the values used in the AERA
- remove the restriction on processing auto hulks
- reorient the mercury limit from an hourly limit to an annual limit
- incorporate an updated feedstock control plan as an enforceable part of the permit.
- incorporate modeling requirements delineating under what circumstances remodeling should be required by the facility
- add standard pollution control equipment requirements
- update fugitive emission calculations and add the requirement for the permittee to submit a comprehensive Fugitive Dust Control Plan

- revise permit language based on updated standard requirements, citation, and formatting
- add a limit on the amount of material allowed to be shredded per day

140. The above-listed permit includes general and specific requirements for mitigation of environmental effects of the proposal. The MPCA finds that the environmental effects of the Project are subject to mitigation by ongoing public regulatory authority.

The Extent to Which Environmental Effects can be Anticipated and Controlled as a Result of Other Available Environmental Studies Undertaken by Public Agencies or the Project Proposer, Including Other EISs

141. The fourth criterion that the MPCA must consider is “the extent to which environmental effects can be anticipated and controlled as a result of other available environmental studies undertaken by public agencies or the project proposer, including other EISs.” Minn. R. 4410.1700, subp. 7. D. The MPCA findings with respect to this criterion are set forth below.
142. The following documents were reviewed by MPCA staff as part of the environmental impact analysis for the proposed Project.
- data presented in the EAW, including an AERA
 - permit application
 - Air Dispersion Modeling Report
 - other reports, land use plans, and analysis as appropriate
 - permits and environmental review of other industrial projects
143. This list is not intended to be exhaustive. The MPCA also relies on information provided by the Project proposer, persons commenting on the EAW, staff experience, and other available information obtained by staff.
144. The environmental effects of the proposed permit amendment have been addressed in the environmental review and permit development processes, and by ensuring conformance with regional and local plans. There are no elements of the proposed Project that pose the potential for significant environmental effects.
145. Based on the environmental review, previous environmental studies, and MPCA staff expertise and experience on similar projects, the MPCA finds that the environmental effects of the Project that are reasonably expected to occur can be anticipated and controlled.
146. The MPCA hereby adopts and incorporates by reference the rationale stated in the attached Response to Comments (Appendix B) and the Technical Support Document for Proposed Air Emission Permit No. 05300480-003 (Appendix C) as an additional basis for response to issues addressed in these Findings.

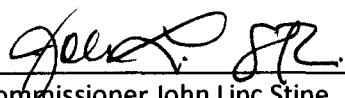
CONCLUSIONS OF LAW

147. The MPCA has jurisdiction in determining the need for an EIS for this Project. The EAW, the permit development process, and the evidence in the record are adequate to support a reasoned decision regarding the potential significant environmental effects that are reasonably expected to occur from this Project.
148. Areas where the potential for significant environmental effects may have existed have been identified and appropriate mitigation measures have been incorporated into the proposed amended permit. The Project is expected to comply with all MPCA standards.
149. Based on a comparison of the impacts that are reasonably expected to occur from the Project with the criteria established in Minn. R. 4410.1700, subp. 7, the Project does not have the potential for significant environmental effects.
150. The preparation of an EIS is not required.
151. Any findings that might properly be termed conclusions and any conclusions that might properly be termed findings are hereby adopted as such.

ORDER

The Minnesota Pollution Control Agency determines that there are no potential significant environmental effects reasonably expected to occur from the proposed Northern Metals Application for Major Permit Amendment project and that there is no need for an Environmental Impact Statement.

IT IS SO ORDERED



Commissioner John Linc Stine
Chair, Citizens' Board
Minnesota Pollution Control Agency

10/1/12

Date