Facility	Receiving Water	Wild Rice Location (DRAFT MPCA List)	Estimated Location of WR Downstream of Discharge (miles)	2014 Effluent Sulfate Concentration (mg/L)	Sulfate Concentration at WR (mg/L) (MPCA Data)	Sulfate Concentration at WR (mg/L) (Company WR Survey Data)	Sulfate concentration at WR greater than 10 mg/L?	Average 2014 Flow (mgd)
US Steel - Minntac Tailings Basin								
	Sand River to Little Sandy & Sandy Lake (Twin Lakes)	Twin Lakes	1 mile	N/A	118-135 (Avg = 126)	129**	Yes	
ArcelorMittal - Laurentian								
SD003	Unnamed wetlands to White Lake	White Lake	0.5 miles	144	No MPCA data (for White Lake)	123	Yes	3.2
Cliffs Erie - Dunka Mining Area								
SD001	Dunka River to Dunka Bay (Birch Lake)	Dunka River	2.5 miles	77	No MPCA data* (for Dunka Bay)	21 (Dunka Bay)	Yes	3.4
SD007	Unnamed Creek to Bob Bay (Birch Lake)	Birch Lake	1.75 miles	1269	No MPCA data* (for Bob Bay)	19.4 (Bob's Bay)	Yes	0.186
Northshore Mining - Peter Mitchell Mine								
SD002	Unnamed Creek to Dunka River	Dunka River	6 miles	119	No MPCA data* (for Dunka River)	21 - 23.6 (Dunka Bay)	Yes	5.7 (max)
SD004	Unnamed Creek to Langley Creek to Dunka River	Dunka River	11 miles	136	No MPCA data* (for Dunka River)	21 - 23.6 (Dunka Bay)	Yes	6.1 (max)

* Birch Lake data:
Range = 3.58 - 8.61 mg/L;
Avg = 6.1 mg/L

** 2013 1854 Report (Twin 3 data point)

DRAFT

Disclaimer: this document is a working document. This document may change over time as a result of new information, further deliberation, or other factors not yet known to the Agency.

DRAFT Permit Limits:
The draft permit would contain no limit for sulfate related to wild rice.

DRAFT

DRAFT Fact Sheet Language (Generic):
The legislature passed a law during the special session in 2015 stating "when issuing, modifying, or renewing national pollutant discharge elimination system (NPDES) or state disposal system (SDS) permits, the agency shall endeavor to protect wild rice, and in doing so shall be limited by the following conditions: (i) the agency shall not require permittees to expend money for design or implementation of sulfate treatment technologies or other forms of sulfate mitigation." 2015 Minn. Laws 1st Sp. Sess. Ch. 4, Art. 4, Sec. 136. The law stipulated that this and other limitations will remain in effect "Until the commissioner of the Pollution Control Agency amends rules refining the wild rice water quality standard in Minnesota rules, part 7050.0224, subpart 2, to consider all independent research and publicly funded research and to include criteria for identifying waters and a list of waters subject to the standard."

To be consistent with this legislation, the draft permit contains no requirements that require expenditures related to wild rice sulfate limits. MPCA anticipates that upon amendment of the rules as described above, (insert draft proposed wild rice water here) will be designated as wild rice waters subject to the wild rice sulfate water quality standard and that measures to reduce the concentrations of sulfate in the (insert draft proposed wild rice water here) will be necessary. Upon adoption of a new wild rice sulfate water quality standard, the agency will require the Permittee to submit an application for a permit modification with the data necessary to establish sulfate limits protective of wild rice in (insert draft proposed wild rice water here), if needed.

The law also provides that "the agency may require sulfate minimization plans in permits." The draft permit requires specific actions be taken to lessen sulfate concentrations in the discharge that will lead to reductions in the (list receiving waters here). The permit contains the following requirement(s) for sulfate minimization:

List draft permit requirements describing actions required by sulfate minimization plan here.

DRAFT Permit Language (Generic):
If, during the term of this permit, rulemaking designates any water body impacted by the discharge as a water to which the wild rice beneficial use applies, the Permittee shall submit an application for permit modification within 90 days of the rule being filed with the Secretary of State.

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POTENTIAL DRAFT Proposed Sulfate Minimization Plan Language (for Permits):

The Permittee shall complete and submit a Sulfate Minimization Plan (SMP) within 120 days after permit issuance. At a minimum, the Sulfate Minimization Plan shall include the following:

1) A summary of influent (if possible) and effluent concentrations, mass loadings and percent removal calculations (if possible) using the most recent five years of monitoring data.

2) Identification of existing and potential sources of elevated sulfate concentrations in the discharge. For each source identified, the Permittee shall propose a strategy for source control and shall develop an implementation plan and schedule for reducing sulfate concentrations from that source.

3) An evaluation of past and present facility operations to determine those operating procedures that could maximize sulfate removal.

4) A summary of sulfate reduction activities implemented during the last five years.

5) Sulfate management and reduction goals for the next five years using the information collected from items 1 through 4 above; and

6)A plan to implement sulfate management and reduction measures consistent with 2015 Minn. Laws 1st Sp. Sess. Ch. 4, Art. 4, Sec 136 during the next five years.

Following MPCA approval, the Permittee shall implement the SMP. If the MPCA does not object to the SMP within 90 days of its submittal, the SMP shall be implemented immediately.

Disclaimer: this document is a working document. This document may change over time as a result of new information, further deliberation, or other factors not yet known to the Agency.

DRAFT

http://www3.epa.gov/npdes/pubs/pt_region5_mercury_pmp_guidance.pdf

MERCURY POLLUTANT MINIMIZATION PROGRAM GUIDANCE U.S. EPA Region 5, NPDES Programs Branch (No

While it is expected that specific permit language and conditions will vary (see Ohio sample PMP permit languag number of important elements for a mercury PMP.

1. A Program Plan, which lays out the POTW's commitments for:
    a. Identification of potential sources of mercury that contribute to discharge levels;
    b. Reasonable, cost-effective activities designed to reduce or eliminate mercury loadings from ic
    c. Tracking mercury source reduction implementation and mercury source monitoring;
    d. Monitoring the POTW's influent, effluent and biosolids, including at least quarterly influent m
    e. Resources and staffing;
2. Implementation of cost-effective control measures for direct and indirect contributors; and
3. An annual status report submitted to the Permitting Authority, which includes:
    a. A list of potential mercury sources;
    b. A summary of actions taken to reduce or eliminate mercury discharges to enable the POTW tc quality based effluent limitation (WQBEL);
    c. Mercury source reduction implementation, source monitoring results, and influent, effluent a
    d. Proposed adjustments to the Program Plan, based on the findings of 3.c.

The goal of the PMP is to move the POTW's effluent level towards, and to achieve as soon as is practicable the l quality based effluent limit necessary to comply with the mercury water quality criteria (which will generally be elsewhere in the Region 5 states).

From MPCA MMP Guide- available on external site

Five steps to build your MMP

At a minimum, the MMP must include the following:

1. A summary of mercury influent and effluent concentrations and biosolids monitoring data using the most rec
2. Identification of existing and potential sources of mercury concentrations and/or loading to the facility.
3. An evaluation of past and present WWTF operations to determine those operating procedures that maximize
4. A summary of any mercury reduction activities implemented during the last five years.
5. A plan to implement mercury management and reduction measures during the next five years.

Develop standard language for Sulfate Minimization Plans

vember 2004)

ge, included in Attachment 1), there are a

dentified sources;

onitoring;

progress toward meeting the water

nd biosolids results for the previous year;

evel specified by the underlying water
1.3 ng/l in the Great Lakes Basin and

ent five years of monitoring data, if available.

mercury removal.

PMP PMP Guide- available on external site

Seven Steps to Build Your PMP

Check your PMP against this list to be sure that you have included all o

1. Provide facility description and flow schematic.
2. Measure your wastewater treatment facility (WWTF
3. Evaluate your WWTF's phosphorus reduction potent
4. Set phosphorus reduction goals for your WWTF.
5. Evaluate how to optimize your WWTF.
6. Evaluate the phosphorus reduction potential of your
7. Create an implementation plan to meet phosphorus

Key similarities

1
2
3
4
5

f the sections below.

:) influent and effluent phosphorus concentrations.
tial.

users.
reduction goals.

influent and effluent concentration characterization
identify pollutant sources
implement pollutant reduction activities
evaluate results/changes
future (implementation) plan to meet Water Quality Standards

2015 Minn. Laws 1st Sp. Sess. Ch. 4, Art. 4, Sec 136

Sec. 136.
WILD RICE WATER QUALITY STANDARDS.

(a) Until the commissioner of the Pollution Control Agency amends rules refining the wild rice water quality standard in Minnesota Rules, part 7050.(research and publicly funded research and to include criteria for identifying waters and a list of waters subject to the standard, implementation of th Minnesota Rules, part 7050.0224, subpart 2, shall be limited to the following, unless the permittee requests additional conditions:

(1) when issuing, modifying, or renewing national pollutant discharge elimination system (NPDES) or state disposal system (SDS) permits, the agency doing so shall be limited by the following conditions:

(i) the agency shall not require permittees to expend money for design or implementation of sulfate treatment technologies or other forms of sulfat

(ii) the agency may require sulfate minimization plans in permits; and

(2) the agency shall not list waters containing natural beds of wild rice as impaired for sulfate under section 303(d) of the federal Clean Water Act, U the rulemaking described in this paragraph takes effect.

(b) Upon the rule described in paragraph (a) taking effect, the agency may reopen permits issued or reissued after the effective date of this section a based on the wild rice water quality standard.

(c) The commissioner shall complete the rulemaking described in paragraph (a) by January 15, 2018.

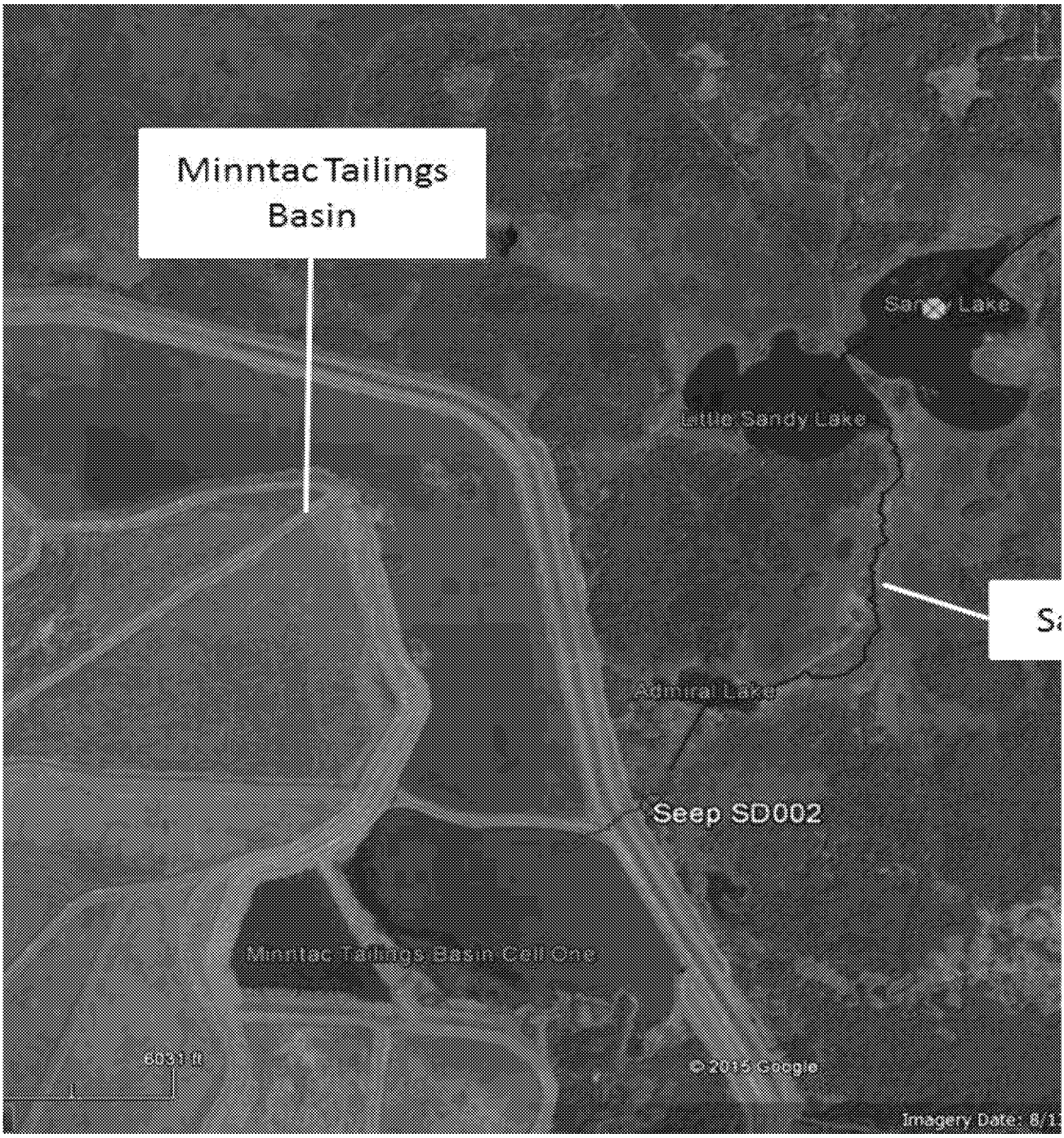
)224, subpart 2, to consider all independent
ıe wild rice water quality standard in

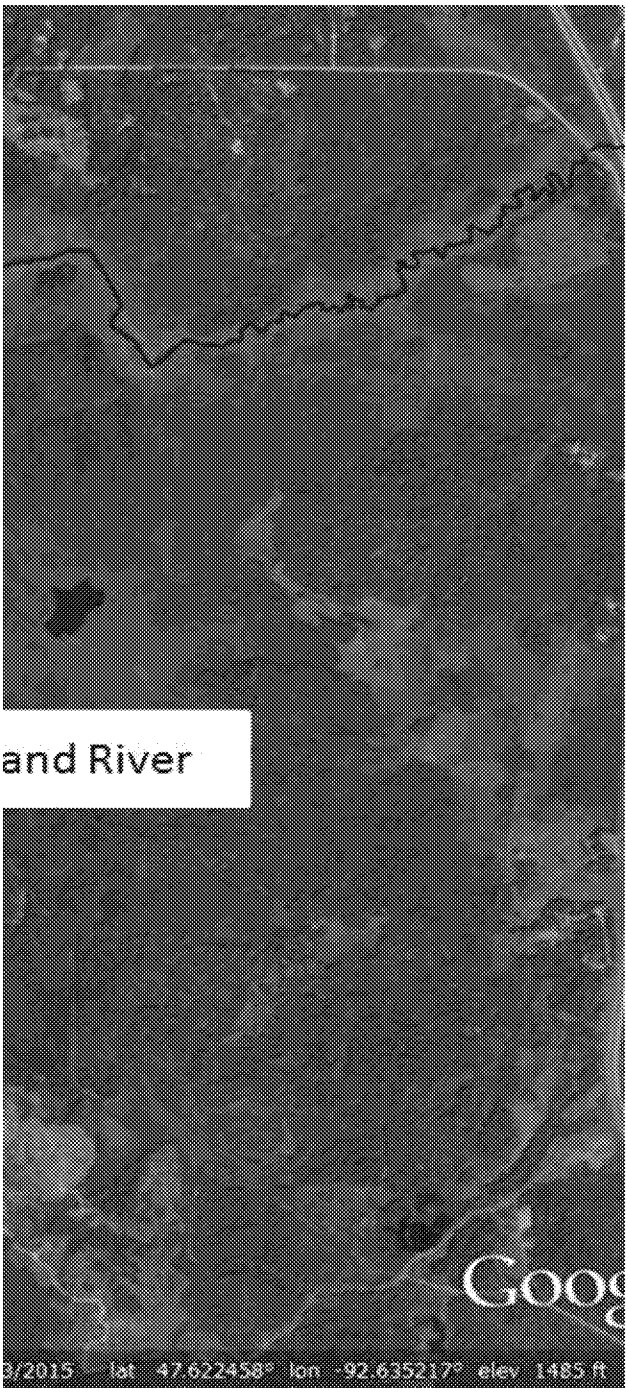
shall endeavor to protect wild rice, and in

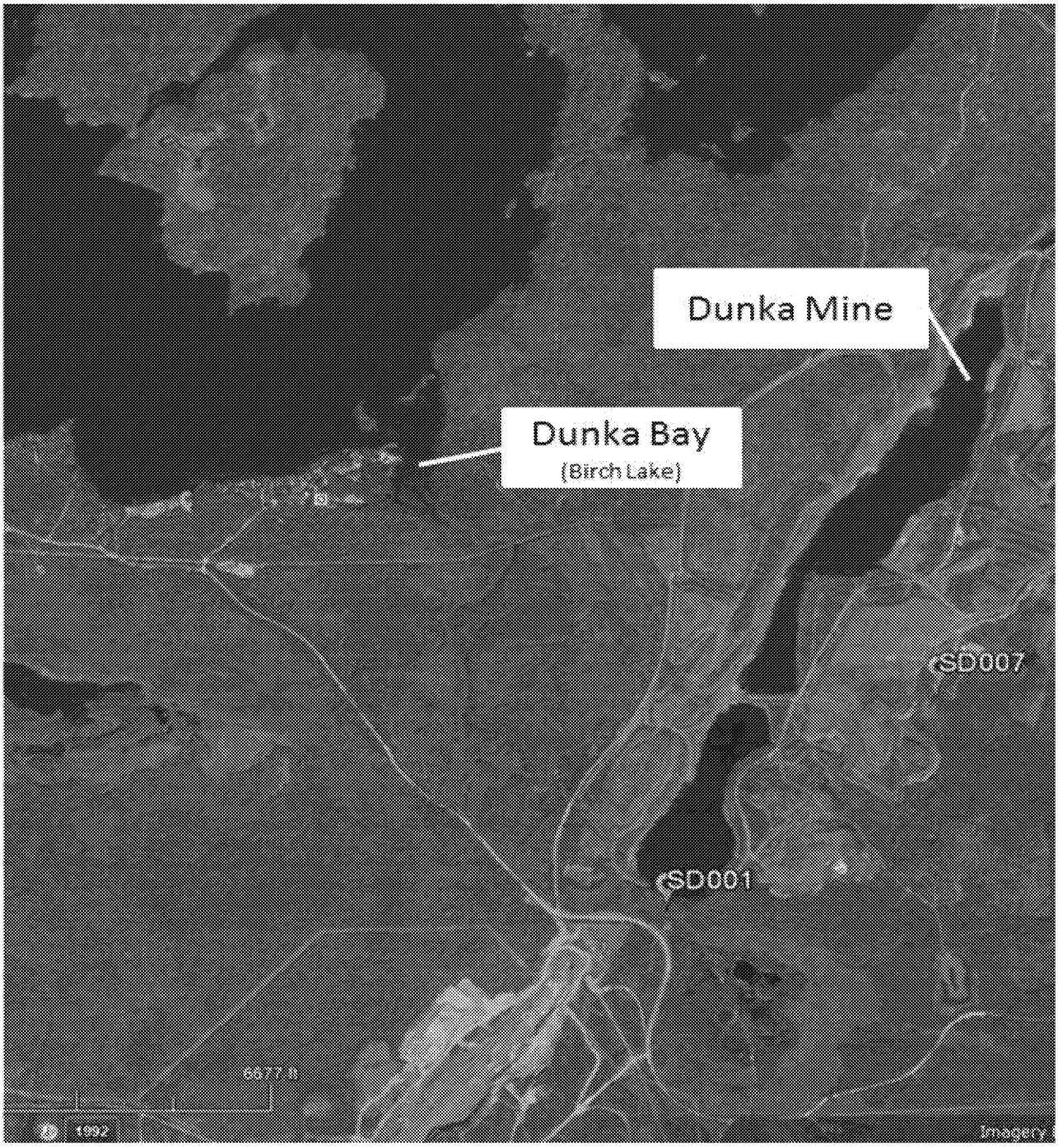
e mitigation; and

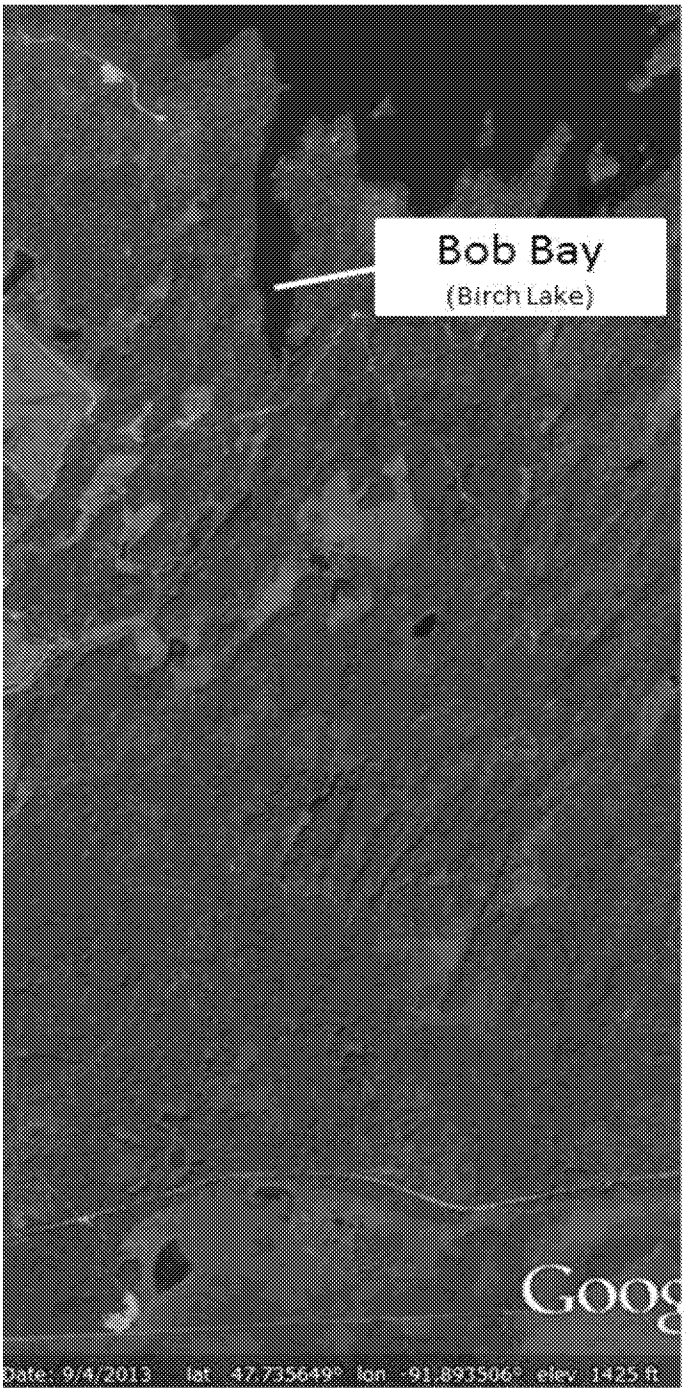
nited States Code, title 33, section 1313, until

ıs needed to include numeric permit limits


Minntac Tailings Basin
Sandy Lake
Little Sandy Lake
Admiral Lake
Seep SD002
Minntac Tailings Basin Cell One
© 2015 Google
Imagery Date: 8/1

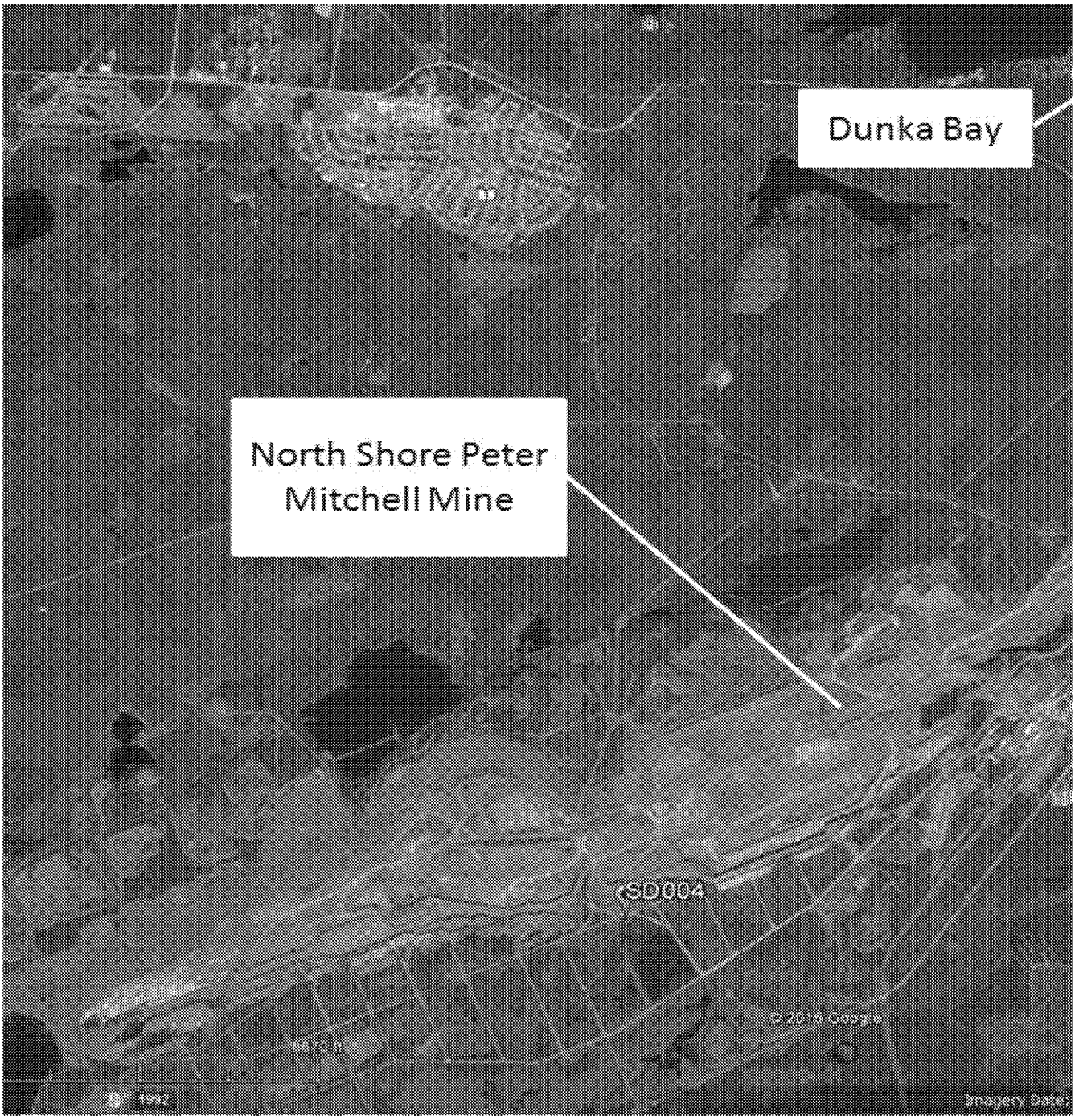

and River
Goog
3/2015 lat 47.622458° lon -92.635217° elev 1485 ft


Dunka Mine
Dunka Bay
(Birch Lake)
SD007
SD001
1992


Bob Bay
(Birch Lake)
Date: 9/9/2013 lat 47.735649° lon -91.893506° elev 1425 ft

Arcelor Mittal
Laurentian Mine
Laurentian Pit
SD003
White Lake

East Reserve
Imagery Date: 6/13/2013


Dunka Bay
North Shore Peter Mitchell Mine
SD004
© 2015 Google
1992
Imagery Date:

SD002
Google
9/4/2013 lat 47.695416° lon -91.940996° elev 1512 ft eye at