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Exceptions to Forfeiture for Mining Questionnaire- Section 42-223(11), Idaho Code

DEPARTMENT OF
WATER RESOURCES

This questionnaire should be used as a guide to provide evidence supporting an exception to forfeiture. Each answer will need to have corresponding documents and/or affidavits.

List the adjudication claim number(s) in which an exception to forfeiture under Section 42-223(11), Idaho Code is sought:

94-2030. This right is also claimed as exempt from forfeiture under Section 42-223(6).

- 1) Enter the name of the mine or property in which the water claimed above was historically used. (All of the following questions will refer to the mine or property named below.)

Treasure Vault. See attached deed(s).

- 2) When was the mining, mineral processing or milling at the mine or property suspended?

1942

- 3) Described the reason(s) the mining, mineral processing or milling of minerals at the mine or property was suspended or the mine was closed?

Economic recession; low metals prices

- 4) Does the mine or property have one or more valuable minerals as defined in Section 47-1205, Idaho Code? If so, please list the mineral(s).

Silver, lead, zinc. See attached mineralization reports.

- 5) Please provide a history of the price of the mineral(s) at the mine or property?

USGS – Metal Prices in the United States through 2010 Report

- 6) Explain how the property and mineral rights have been maintained for future mineral production at the mine or property?

Hecla owns the patented mining claims, including the mineral rights where these mines are located. In

addition, the company maintains stormwater permits associated with these claim sites, conducts annual

inspections of the sites, and maintains access to the sites. See attached example of a stormwater permit

and inspection report and copy of a map of access routes to these mining properties (yellow dots depict mine

sites included in annual inspections; blue lines are access routes). The surface of this mine property is free of

any structures or encumbrances that would interfere with mining or milling operations. The only structures on

the surface are those associated with historic mining activities or property caretaking.

Paul L. Glader Environmental Director

Please print name and title of person completing this questionnaire

6/18/15

Date



Signature of person completing this questionnaire

Exceptions to Forfeiture for Mining Questionnaire Attachments

- ♦ Ownership Deeds/Information
- ♦ Historical operation records
- ♦ Historical production records/mineralization reports
- ♦ USGS – Metal Prices in the United States through 2010
- ♦ Example stormwater inspection report
- ♦ Map of historical mine site access routes
- ♦ Stormwater permit example

SPECIAL WARRANTY DEED

This Special Warranty Deed is executed and delivered this 28th day of February, 1992, by HECLA MINING COMPANY, a Delaware corporation ("Grantor") to LOUISIANA-PACIFIC CORPORATION, a Delaware corporation ("Grantee"), whose address is P.O. Box 4000-98, Hayden Lake, Idaho 83835-4000.

Grant, Exceptions and Reservations. FOR VALUE RECEIVED, Grantor grants, bargains, sells and conveys to Grantee the surface rights to that certain real property located in Shoshone County, Idaho, described on Exhibit A, attached hereto and incorporated herein by this reference together with (i) the right to lateral and subjacent support subject to Hecla's reserved rights; (ii) the right to ordinary soil, rock, sand and gravel located within 100 feet of the surface of said real property; and (iii) the right to reasonable subsurface access to obtain water and the full benefit of the property rights transferred herein (the "Property"); EXCEPTING AND RESERVING TO GRANTOR all other subsurface rights and the "Minerals," and the right to use as much of the surface of the real property described in Exhibit A as in the reasonable judgment of Hecla is reasonably necessary for "Access" and "Mining Operations".

For the purposes of this Deed,

- A. "Minerals" shall mean all ores, base and precious metals, coal, oil, gas, other liquid or gaseous hydrocarbons, minerals and mineral bearing substances of every kind and character, whether currently known to be valuable or becoming valuable in the future, now known to exist or hereafter discovered on, in or under the Property, but excluding ordinary soil and rock, sand and gravel.
- B. "Access" shall mean the right of the Grantor to use existing roads on the Property in connection with Mining Operations and Other Operations and the right to construct new roads, pipelines, powerlines, rail lines or conveyors, tramways, communication lines and other similar access and communications facilities to be used in connection with Mining Operations.
- C. "Mining Operations" shall mean without limitation the right to conduct geological, geophysical or geochemical exploration and the extraction and processing of Minerals on the Property by any method now known or subsequently developed including the right to use water from the Property for such purposes, and the right to use the Property for excavations, tunnels, adits, drill holes, wells, surface mine operations, buildings, tailings, stock piling of ores and mine waste and other facilities as in the reasonable judgment of

351159

Grantor is reasonably necessary for the exploration and extraction of Minerals.

- D. "Other Operations" shall mean without limitation forest management and timber harvesting and other current uses of the land in the vicinity of the Property now owned or controlled by Grantor or Grantor's affiliates.

TO HAVE AND TO HOLD the said premises, with their appurtenances unto Grantee, its successors and assigns forever. Grantor covenants with and warrants to Grantee that Grantor will defend the Property from all lawful claims whatsoever of persons claiming by, through or under Grantor but not otherwise, subject to the following exceptions:

- (i) Power line and other utility easements of record or in view as of the date hereof;
- (ii) Reservations or exceptions contained in federal patents or in Acts authorizing the issuance thereof;
- (iii) Liens for taxes not yet payable;
- (iv) All rights reserved to or vested in any governmental, statutory or public authority to control or regulate the Hecla Property in any manner, and all applicable laws, rules and orders of governmental authority.
- (v) The exceptions set forth in Exhibit A to this deed.

This grant and conveyance is subject to the terms and conditions of that certain agreement by and between Grantor and Grantee dated February 28, 1992.

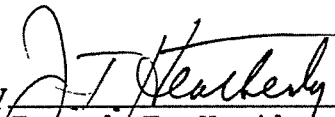
IN WITNESS WHEREOF, the Grantor has caused this Special Warranty Deed to be signed as of the day and year first above written.

HECLA MINING COMPANY, GRANTOR

Attest


Michael B. White
Secretary

By

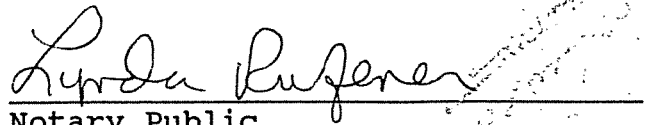

Joseph T. Heatherly
Vice President

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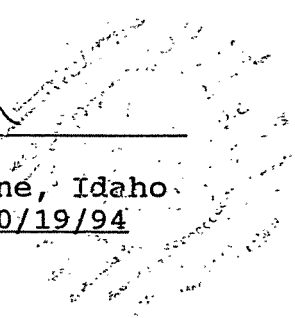
STATE OF IDAHO)
)ss.
County of Kootenai)

On this 28th day of February, 1992, before me, the undersigned, a Notary Public in and for the State of Idaho, personally appeared JOSEPH T. HEATHERLY and MICHAEL B. WHITE, known or identified to me to be the Vice President and Secretary, respectively, of HECLA MINING COMPANY, the officers who executed the instrument on behalf of said corporation, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year in this certificate first above written.



Notary Public
Residing at Coeur d'Alene, Idaho
My Commission Expires: 10/19/94



351159

Exhibit A - Page 7

HECLA MINING COMPANY
BLUE BIRD GROUP

All or a portion of three (3) patented lode claims located in Section 1, Township 48 North, Range 4 East, B.M., Placer Center Mining District, Shoshone County, Idaho, as listed below by mineral survey number and claim name:

<u>Claim Name</u>	<u>Mineral Survey Number</u>	<u>Acres</u>
Blue Bird Mine	2265	
Montana Fr.	2265	
Montana Mine	2265	36.061

Which are located within the following described perimeter boundary:

BEGINNING at Corner 1 of the BLUE BIRD MINE (MS 2265);

THENCE S 38°25' W, 607.9 feet to Corner 2 of the BLUE BIRD MINE;

THENCE S 80°47' E, 1,220.6 feet to Corner 3 of the BLUE BIRD MINE;

THENCE N 38°25' E, 594.1 feet to Corner 4 of the BLUE BIRD MINE;

THENCE S 80°13' E, 13.1 feet to Corner 2 of the MONTANA FRACTION (MS 2265);

THENCE S 73°34' E, 238 feet to Corner 3 of the MONTANA FRACTION;

THENCE N 40°20' E, 529.36 feet to Corner 4 of the MONTANA FRACTION;

THENCE N 73°34' W, 412.8 feet to Corner 4 of the MONTANA MINE (MS 2265);

THENCE N 75°12'30" W, 1,418.4 feet to Corner 1 of the MONTANA MINE;

THENCE S 21°07' W, 611.9 feet to Corner 2 of the MONTANA MINE;

(continued)

351159

Exhibit A - Page 8

THENCE S 80°13' E, 209.7 feet to Corner 1 of the BLUE BIRD MINE, the point of beginning and containing an area of 36.061 acres more or less.

(continued)

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TWENTY-FOURTH ANNUAL
REPORT OF THE
MINING INDUSTRY
OF IDAHO

FOR THE YEAR
1922



Idaho
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1922

STEWART CAMPBELL
INSPECTOR OF MINES

MISS A. F. MAHAN
Secretary

and complete mining equipment were installed and active work was started to extend this tunnel into the Tamarack and Custer property. When completed this tunnel will give great additional depth on the Tamarack vein and in the future will be known as Tamarack No. 7 tunnel.

TEDDY MINING & MILLING CO., LTD.

Office: Kellogg. **Officers:** T. R. Mason, Pres.; J. B. Cox, Sec.-Mgr., both of Kellogg. **Inc.:** Dec. 1, 1904. **Capital:** 1,000,000 shares; par value \$1; 770,000 shares issued. **Property:** Teddy group; 9 unpatented claims, Yreka dist.; Kellogg. **Development:** Over 1800 ft. of tunnels, the principal one of which is approximately 800 ft. long. **Ore:** Lead-zinc-silver. **Remarks:** Assessment work only. An assessment of 1½ mills levied June 3, 1922.

TEN TO ONE MINING CO.

Office: 617 Peyton Bldg., Spokane, Wash. **Officers:** Sherman Deery, Pres.; W. W. Johnston, Sec., both of Spokane. **Inc.:** June 2, 1921. **Capital:** 1,000,000 shares; par value 10c; 205,000 shares issued. **Property:** 20 unpatented claims, Summit dist.; Murray. **Development:** 3 tunnels: No. 1, 40 ft. long; No. 2, 50 ft. long; No. 3, 80 ft. long. **Ore:** Lead-copper-gold-silver.

TERRIBLE EDITH

Owner: Wash Snyder, Murray. **Property:** Terrible Edith group; 1 patented, 13 unpatented claims, Summit dist.; Murray. **Development:** Principally by 4 tunnels: No. 1, 100 ft. long; No. 2, 240 ft. long; No. 3, 420 ft. long; No. 4, 1320 ft. long. **Ore:** Lead-silver-zinc. **Remarks:** The owner has been actively engaged in developing his prospect and a few intermittent shipments of ore have been made.

THRONDSOON METALS SAVINGS CO.

Office: Kellogg. **Officers:** Elmer C. Brain, Pres.-Mgr.; J. A. McEachran, Sec., both of Kellogg. **Inc.:** July 28, 1917. **Capital:** 1,000,000 shares; par value 10c; all shares issued. **Property:** 80 acres patented land, 40 acres placer claim; Yreka dist.; Kellogg. **Plant:** MILL: 100-ton flotation; reclaiming river bottom tailings. **Ore:** Lead-zinc-silver.

TRADE DOLLAR MINING CO., LTD.

Office: Wallace. **Officers:** Frank P. Markwell, Pres., Los Angeles, Calif.; Everett H. Pattison, Sec., Long Beach, Calif. **Inc.:** Oct. 18, 1901. **Capital:** 1,000,000 shares; par value 10c; all shares issued. **Property:** Trade Dollar group; 7 patented claims, Lelande dist.; Burke. **Remarks:** An assessment of 1 mill levied Aug. 12, 1922. Idle throughout the year.

TREASURE VAULT MINING CO., LTD.

Office: Wallace. **Officers:** P. J. Maggy, Clerk, Wallace. **Inc.:** Oct. 29, 1906. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** 4 claims, Placer Center dist.; Wallace. **Development:** 290 ft. shaft with 450 ft. of drifts and crosscuts.

TUCKER MINING & MILLING CO.

Office: Wallace. **Officers:** Peter Bahn, Pres.-Mgr.; W. Turner, Sec., both of Wallace. **Inc.:** March 30, 1907. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Tucker group; 6 unpatented claims, Hunter dist.; Mullan. **Development:** Principally by one tunnel which is 1200 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

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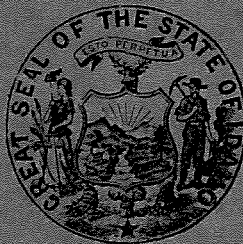
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TWENTY-FIFTH ANNUAL REPORT
OF THE
Mining Industry
OF IDAHO
FOR THE YEAR
1923



STEWART CAMPBELL
INSPECTOR OF MINES

MISS A. F. MAHAN
SECRETARY

TERRIBLE EDITH

Owner: Wash Snyder, Murray. **Property:** Terrible Edith group; 1 patented, 13 unpatented claims, Summit dist.; Murray. **Development:** Principally by 4 tunnels: No. 1, 100 ft. long; No. 2, 240 ft. long; No. 3, 420 ft. long; No. 4, 1320 ft. long. **Ore:** Lead-silver-zinc.

THRONDSOON METALS SAVINGS CO.

Office: Kellogg. **Officers:** Elmer C. Brain, Pres.-Mgr., Humble, Texas; J. A. McEachran, Sec., Kellogg. **Inc.:** July 28, 1917. **Capital:** 1,000,000 shares; par value 10c; all shares issued. **Property:** 2 unpatented claims; Yreka dist.; Kellogg. **Ore:** Lead-zinc-silver.

TIBERIUS MINING CO.

Office: 314 Symons Bldg., Spokane, Wash. **Officers:** William Hunter, Pres., Moscow; M. L. Lewis, Sec., Spokane, Wash. **Inc.:** March 9, 1916; charter forfeited Dec. 1, 1922. **Capital:** 1,000,000 shares; par value 10c; 611,450 shares issued. **Property:** 40 acres of patented land in Pine Creek, Yreka dist.; Kellogg.

TRADE DOLLAR MINING CO., LTD.

Office: Wallace. **Officers:** Frank P. Markwell, Pres., Los Angeles, Calif.; Everett H. Pattison, Sec., Long Beach, Calif. **Inc.:** Oct. 18, 1901. **Capital:** 1,000,000 shares; par value 10c; all shares issued. **Property:** Trade Dollar group; 6 patented claims, Lelande dist.; Burke. **Remarks:** Idle throughout the year.

TREASURE VAULT MINING CO., LTD.

Office: Wallace. **Officers:** P. J. Maggy, Clerk, Wallace. **Inc.:** Oct. 29, 1906. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** 4 claims, Placer Center dist.; Wallace. **Development:** 290 ft. shaft with 450 ft. of drifts and crosscuts. **Remarks:** Idle throughout the year.

TRI-METALS MILLING CO.

Office: Kellogg. **Officers:** Lester S. Harrison, Pres.; J. Benjamin Parker, Sec., both of Kellogg. **Inc.:** Organization unknown. **Capital:** 96,000 shares; par value 25c; all shares issued.

TUCKER MINING & MILLING CO.

Office: Wallace. **Officers:** Peter Bahn, Pres.-Mgr.; W. A. Turner, Sec., both of Wallace. **Inc.:** March 30, 1907. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Tucker group; 6 unpatented claims, Hunter dist.; Mullan. **Development:** Principally by one tunnel which is 1200 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

TUSCUMBIA MINING CO., LTD.

Office: Wallace. **Officers:** George May, Pres., Stevensville, Mont.; Morton Webster, Sec., Wallace. **Inc.:** Aug. 14, 1911. **Capital:** 1,500,000 shares; par value 50c; all shares issued. **Property:** 1 patented, 4 unpatented claims, Beaver dist.; Carbonite. **Development:** By 4 tunnels: No. 1, 160 ft. long; No. 2, 80 ft. long; No. 3, 680 ft. long; No. 4, 330 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

UNITED AMERICAN MINES CO., LTD.

Office: Wallace. **Officers:** Frank P. Markwell, Pres., Los Angeles, Calif.; Everett H. Pattison, Sec., Long Beach, Calif. **Inc.:** Jan. 24, 1908. **Capital:** 3,000,000 shares; par value \$1; all shares issued. **Property:** 2 patented claims, Lelande dist.; Black Bear. **Ore:** Lead-silver. **Remarks:** This company owns the controlling interest in the Sister Mining & Milling Co., Ltd., and the Trade Dollar Mining Co., Ltd.

VIENNA-INTERNATIONAL MINING & MILLING CO., LTD.

Office: Wallace. **Officers:** A. H. Featherstone, Pres.; R. A. Marshall,

HECLA MINING COMPANY
ENGINEERING OFFICE

FORTY-FIFTH
ANNUAL REPORT

OF THE

Mining Industry
of Idaho

FOR THE YEAR

1943



Idaho ores and gravels in 1943,
yielded gold, silver, copper, lead
and zinc—valued at \$43,910,180.

ARTHUR CAMPBELL

Inspector of Mines
BOISE, IDAHO

Hardy, Pres.; C. M. Hull, Sec., both gr., Kellogg. Inc.: Jan. 3, 1921. Capital: 188,821 shares issued. Property: Yankee Creek, Yreka dist.; Kellogg. Development: Shaft is 2000 ft., and 3 shafts, the principal an inclined shaft 2356 ft. in depth; 762.3 ft. Plant: MINE: 3 Worthington 1 electrically driven; complete mining MILL: 1,100-ton concentrator, including : Copper, antimony and silver. Men s: Development during the year: Drift- 3.8 ft.; raising, 2383.7 ft. Electrolytic recovery of metallic antimony from site ores. Capacity 5000 lbs. of metallic

Lorenzi, Pres.; H. J. Hull, Sec., both apital: 2,700,000 shares; par value \$1; Sunshine group; 4 patented, 11 unpat- e. Development: More than 6000 ft. of ctically driven I-R 5-drill compressor; amp. Ore: Lead-zinc. Remarks: This eceived shares of Portland Mining Co. claims and property. It subsequently stock of the Monitor Mining Co., and unshine Limited shareholders and the

Joshua Green Bldg., Seattle, Wash.; F. ril 22, 1940. Capital: 3,500,000 shares; ed. Property: 3 patented claims, Hunt- pproximate total development 4,000 ft. Denver compressor; complete mining Remarks: Idle.

ATED MINING CO.

. Day, Pres.-Mgr.; S. F. Heitfield, Sec., 2. Capital: 5,000,000 shares; par value amarack & Custer groups; 78 patented dists.; Gem. Development: Length of g; No. 2, 3350 ft. long; No. 3, 2630 ft. 12,227 ft. long; No. 6, 8916 ft. long and al vertical shafts are: 622 ft., 187 ft. lined shaft is 605 ft. long and gains a evelopment, approximately 90,012 ft. tuma hoist; 2 electrically driven 1300 attery haulage on intermediate levels 1 main levels; modern and complete rannel sprinklers against fire. MILL: nc-silver. Remarks: Development work ; drifting, 1517 ft.; raising, 833 ft.;

TD.

ane, Wash. Officers: Harvey A. Miller, son, Sec., Kellogg. Inc.: Dec. 1, 1904. ie \$1; increased on April 26, 1930, to ed. Property: Teddy group; 10 unpat- Development: More than 2350 ft. of is approximately 1500 ft. long. Ore:

TRADE DOLLAR MINING CO., LTD.

Office: 567 La Paz Drive, San Marino, Calif. Officers: A. J. Heger, Pres., 574 Woodbury Rd., Glendale, Calif.; Isabel M. Pattison, San Marino, Calif. Inc.: Oct. 18, 1901. Capital: 1,000,000 shares; par value 10c; shares issued, 663,987. Property: Trade Dollar group; 6 patented claims, Lelande dist.; Burke. Ore: Lead-zinc-silver. Remarks: Idle.

TREASURE VAULT MINING CO., LTD.

Office: Wallace. Officers: Henry Lawrence Day, Pres.; R. W. Anno, Sec., both of Wallace. Inc.: Oct. 29, 1906. Capital: 1,000,000 shares; par value \$1; 770,000 shares issued. Property: Treasure Vault group; 4 patented claims, Placer Center dist.; Wallace. Ore: Lead-silver-zinc. Remarks: Idle.

UNITED AMERICAN MINES CO., LTD.

Office: 567 La Paz Drive, San Marino, Calif. Officers: A. J. Heger, Pres., Glendale, Calif.; Isabel M. Pattison, Sec.-Treas., San Marino, Calif. Inc.: Jan. 24, 1908. Capital: 3,000,000 shares; par value \$1; 2,767,625 shares issued. Remarks: This company holds stock in the Sister Mining & Milling Co., Ltd. and Trade Dollar Mining Co., Ltd., both of which are idle.

UNITED LEAD-ZINC MINES COMPANY

Office: Wallace. Officers: A. H. Featherstone, Pres.; J. H. Graber, Sec., both of Wallace. Inc.: Mar. 30, 1933, as Golconda Extension Mining Company; name changed Dec. 9, 1937. Capital: 3,000,000 non-assessable shares; par value 5c, all shares issued. Property: 3 patented and 24 unpatented claims; Hunter dist., Wallace. Development: Principal tunnel, 950 ft. Ore: Lead-silver-zinc. Remarks: Idle.

VIENNA-INTERNATIONAL MINING & MILLING CO.

Office: Wallace. Officers: A. H. Featherstone, Pres.-Mgr.; James Pearce, Sec., both of Wallace. Inc.: Sept. 10, 1906. Capital: 1,500,000 shares; par value \$1; shares issued, 1,325,000. Property: Vienna International; 4 patented claims, Placer Center dist., Wallace. Development: Approximately 850 ft. of tunnels. Ore: Lead, silver, zinc and gold. Remarks: Idle.

VINDICATOR MINING CO.

Office: 6231 Shattuck Ave., Oakland, Calif. Officers: Mrs. K. Powers, Pres.; Grace Powers Oldfield, Sec., both of Oakland, Calif. Inc.: June 9, 1902. Capital: 1,000,000 shares; par value 10c; 549,650 shares issued. Property: 4 unpatented claims, Hunter dist.; Mullan. Development: By 2 tunnels: No. 1, 1200 ft. long; No. 2, 400 ft. long. Ore: Lead and silver. Remarks: Idle.

WALLACE IDAHO LEAD MINES, INC.

Office: E. 1517 16th, Spokane, Wash. Officers: John A. Wilson, Sec., Spokane, Wash. Inc.: July 25, 1929. Capital: 2,000,000 shares; par value 25c; 1,300,000 shares issued. Property: Eastern Star group; 2 unpatented claims, Evolution dist.; Osburn. Development: Approximate total develop- ment, 2000 ft. Ore: Lead and silver. Remarks: Idle.

WALLACE MINING COMPANY

Office: Wallace. Officers: A. H. Featherstone, Pres.; Wm. Featherstone, Sec., both of Wallace. Inc.: June 24, 1892. Amendment filed extending corporate existence 50 years from and after June 24, 1942. Capital: 500,000 shares; par value \$1; 485,000 shares issued. Property: 2 patented claims, Lelande dist.; Gem. Ore: Lead, silver and zinc. Remarks: Idle.

WALLACE SILVER-LEAD MINES COMPANY

Office: Wallace. Officers: Walter H. Hanson, Pres.; Chas. E. Horning, Sec., both of Wallace. Inc.: Aug. 17, 1927. Capital: 5,000,000 shares; par value 10c; 1,797,132 shares issued. Property: 1 patented, 5 unpatented claims, Placer Center dist.; Wallace. Development: By 3 tunnels, the principal tunnel 5261 ft. Approximate total development to date, 7876 ft. Plant: 10x10 Sullivan compressor; 50 h.p. motor; blacksmith shop; com- pressor room and dry house. Ore: Lead-silver-zinc. Remarks: Idle.

50th Annual Report
OF THE
MINING INDUSTRY
OF THE
STATE OF IDAHO
FOR THE YEAR 1948



GEO. A.
MCDOWELL
Inspector of Mines

MYRTLE
ELLEN SOHN
Secretary

10,000 shares; par value \$100; 518 shares issued. **Remarks:** This property has been sold to Day Mines, Inc.

DAY MINES, INC.

Office: Wallace. **Officers:** Henry L. Day, Pres.; S. F. Heitfeld, Sec., both of Wallace. **Inc.:** October 1, 1947. **Capital:** 5,000,000 non-assessable shares, par value 10c; 2,886,575 shares issued. **Men Employed:** Average, 500. **Ore:** Silver, lead, zinc, copper, antimony. **Remarks:** Day Mines, Inc., came into existence on October 1, 1947, as a result of a statutory consolidation effected under the laws of the state of Idaho, Delaware and Nevada, the corporate domicile of the predecessors of constituent corporations whose names were as follows: Tamarack & Custer Consolidated Mining Company, Hercules Mining Company, Sherman Lead Company, Dayrock Mining Company, Monitor Mining Company, King Mining Company, Stanley Mining Company, Duluth Mining Company, Happy Day Mining Company, Ltd., Western Union Mining Company, Crystal Lead Mines Company and Treasure Vault Mining Company.

DAYROCK MINING CO.

Office: Wallace. **Officers:** Henry L. Day, Pres.; S. F. Heitfeld, Sec., both of Wallace. **Inc.:** Nov. 30, 1923 as Strattons Mines Co.; name changed Nov. 19, 1928. **Capital:** 2,000,000 shares; par value 10c; 1,747,229 shares issued. **Property:** 47 patented and 22 unpatented claims; Evolution, Beaver and Placer Center dists.; Wallace. **Development:** By 22 tunnels the longest of which is 21,508 feet. Approximate total development 59,744 ft. **Plant:** MINE: Electrically driven hoist and 2 electrically driven compressors; complete mining equipment; storage-battery locomotive and haulage. **MILL:** 150-ton Selective flotation. **Ore:** Lead-silver. **Remarks:** Development work done during the year: Crosscutting, 1,232 ft.; drifting, 2,645 ft.; raises, 839 ft. **NOTE:** On October 1, 1947 the Dayrock Mining Company was consolidated into a new corporation named Day Mines, Inc., as a result of a statutory consolidation effected under the laws of the State of Idaho. The corporate existence of this company was terminated by operation of law on this date as a result of such statutory consolidation.

DOBSON PASS LEAD AND SILVER MINES CORP.

Office: Cataldo. **Officers:** M. D. Anderson, Pres., Cataldo; A. J. Teske, Sec., Wallace. **Inc.:** Sept. 17, 1932. **Capital:** 1,500,000 non-assessable shares; par value 10c; 158,762 shares issued. **Property:** 3 patented claims; Dobson Pass group; Beaver mining dist., Wallace. **Development:** By 1 tunnel. **Ore:** Lead and silver. **Remarks:** Idle.

DOUGLAS MINING CO., LTD.

Office: Wallace. **Officers:** Stanly A. Easton, Pres.-Mgr., Kellogg; Lennis E. Hill, Sec., Wallace. **Inc.:** Oct. 24, 1903. **Capital:** 1,200,000 shares; par value \$1; all shares issued. **Property:** Douglas group; 17 patented and 1 unpatented claims, Yreka dist.; Kellogg. **Development:** By 4 tunnels totaling 4,830 feet and an inclined shaft 330 ft. **Plant:** MINE: Electrically driven compressor and hoist; complete mining equipment and camp. **Ore:** Lead and zinc. **Remarks:** Leased to Douglas Leasing Company, Wallace, Idaho. 210.5 ft. of crosscutting and 407 ft. of drifting done under contract during the year.

DULUTH MINING CO.

Office: Wallace. **Officers:** Henry L. Day, Pres.; S. F. Heitfeld, Sec., both of Wallace. **Inc.:** June 10, 1909. **Capital:** 1,500,000 shares; par value 25c; 320,210 shares issued. **Property:** Duluth group; 8 patented claims, Lelande dist., Burke. **Development:** By 5 tunnels. **Ore:** Lead-silver. **Remarks:** Idle. **NOTE:** On October 1, 1947 the Duluth Mining Co. was consolidated into a new corporation named Day Mines, Inc. as a result of a statutory con-

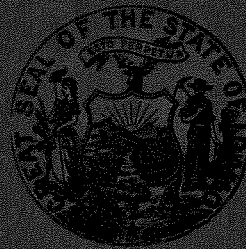
Forty-Fourth Annual Report

OF THE

MINING INDUSTRY OF IDAHO

FOR THE YEAR

1942



Idaho ores and gravels in 1942 yielded gold, silver, copper, lead and zinc — valued at \$44,898,692

ARTHUR CAMPBELL

Inspector of Mines

Boise, Idaho

TREASURE VAULT MINING CO., LTD.

Office: Wallace. Officers: Henry Lawrence Day, Pres.; R. W. Anno, Sec., both of Wallace. Inc.: Oct. 29, 1906. Capital: 1,000,000 shares; par value \$1; 770,000 shares issued. Property: Treasure Vault group; 4 patented claims, Placer Center dist.; Wallace. Ore: Lead-silver-zinc. Remarks: Idle except for leasers working on dumps.

UNITED AMERICAN MINES CO., LTD.

Office: 567 La Paz Drive, San Marino, Calif. Officers: A. J. Heger, Pres., Glendale, Calif.; Isabel M. Pattison, Sec.-Treas., San Marino, Calif. Inc.: Jan. 24, 1908. Capital: 3,000,000 shares; par value \$1; 2,767,625 shares issued. Remarks: Idle.

UNITED LEAD-ZINC MINES COMPANY

Office: Wallace. Officers: A. H. Featherstone, Pres.; Herman Marquardt, Sec., both of Wallace. Inc.: Mar. 30, 1933, as Golconda Extension Mining Company; name changed Dec. 9, 1937. Capital: 3,000,000 non-assessable shares; par value 5c, 2,226,000 shares issued. Property: 27 unpatented claims, Hunter dist., Wallace. Development: Principal tunnel, 950 ft. Ore: Lead-silver. Remarks: Annual assessment work only.

VIENNA-INTERNATIONAL MINING & MILLING CO.

Office: Wallace. Officers: A. H. Featherstone, Pres.-Mgr.; James Pearce, Sec., both of Wallace. Inc.: Sept. 10, 1906. Capital: 1,500,000 shares; par value \$1; shares issued, 1,325,000. Property: Vienna International; 4 patented claims, Placer Center dist., Wallace. Development: Approximately 850 ft. of tunnels. Ore: Lead, silver and zinc. Remarks: Idle.

VINDICATOR MINING CO.

Office: 6231 Shattuck Ave., Oakland, Calif. Officers: Mrs. K. Powers, Pres.; Grace Powers, Sec., both of Oakland, Calif. Inc.: June 9, 1902. Capital: 1,000,000 shares; par value 10c; 549,650 shares issued. Property: 4 unpatented claims, Hunter dist.; Mullan. Development: By 2 tunnels: No. 1, 1200 ft. long; No. 2, 400 ft. long. Ore: Lead and silver. Remarks: Assessment work only.

WALLACE IDAHO LEAD MINES, INC.

Office: E. 1517-16th, Spokane, Wash. Officers: John A. Wilson, Sec., Spokane, Wash. Inc.: July 25, 1929. Capital: 2,000,000 shares; par value 25c; 1,300,000 shares issued. Property: Eastern Star group; 2 unpatented claims, Evolution dist.; Osburn. Development: Approximate total development, 2000 ft. Ore: Lead, silver and zinc. Remarks: Idle.

WALLACE MINING COMPANY

Office: Wallace. Officers: A. H. Featherstone, Pres.; Wm. Featherstone, Sec., both of Wallace. Inc.: June 24, 1892. Amendment filed extending corporate existence 50 years from and after June 24, 1942. Capital: 500,000 shares; par value \$1; 485,000 shares issued. Property: 2 patented claims, Leland dist.; Gem. Ore: Lead, silver and zinc. Remarks: Idle.

WALL STREET MINING CO.

Office: Wallace. Officers: L. E. Hanley, Pres.-Mgr.; Bert P. Woolridge, Sec., both of Wallace. Inc.: April 20, 1907. Capital: 1,250,000 shares; par value \$1; 1,241,263 shares issued. Property: 17 patented claims, Hunter dist.; Mullan. Development: Principally by 3 tunnels, the longest of which is 1200 ft. Plant: Electrically driven compressor; complete mining equipment. Ore: Lead-silver. Remarks: Idle.

WASHINGTON MINING COMPANY

Office: Wallace. Officers: John C. Glahe, Pres.; Mark Evans, Sec., both of Wallace. Inc.: Jan. 14, 1911. Capital: 1,500,000 shares; par value \$1; 184,050 shares issued. Property: 6 unpatented claims, Summit dist.; Burke. Development: By 2 tunnels; No. 1, 400 ft. long; No. 2, 1000 ft. long; approximate total development 1600 ft. Ore: Lead. Remarks: 24 ft. of development work during the year.

WESTERN PACIFIC MINING CO.

Office: Wallace. Officers: Chas. F. Buchanan, Pres., Los Angeles, Calif.; J. Fred Markwell, Sec., Wallace. Inc.: April 6, 1922. Capital: 2,500,000 shares; par value 1c; 1,250,000 shares issued. Property: South Side group; 10 patented and 4 unpatented claims, Leland dist.; Gem. (11 claims are

Proxy Statement

of

King Mining Company

TABLE of CONTENTS

PLAN OF REORGANIZATION.....	1
HISTORY AND BUSINESS OF CONSTITUENT CORPORATIONS AND THEIR SUBSIDIARIES.....	2
General Information.....	2
Earnings — Dividends Paid.....	3
Working Capital.....	3
Current Metal Prices.....	3
Ore Reserves - General.....	4
Effect of Extension of Premium Price Plan.....	4
Operations if Consolidation Effected.....	4
Financing Exploration Plans.....	5
Tamarack & Custer Consolidated Mining Company.....	5
Hercules Mining Company.....	9
Sherman Lead Company.....	11
Dayrock Mining Company.....	14
Monitor Mining Company.....	17
King Mining Company.....	21
Stanley Mining Company.....	22
Duluth Mining Company.....	22
Happy Day Mining Company, Ltd.....	22
Western Union Mining Company.....	23
Crystal Lead Mines Company.....	23
Treasure Vault Mining Company.....	23
Aurum Mining Company.....	24
Fern Mining Company.....	26
CAPITALIZATION OF THE CONSOLIDATED CORPORATION.....	26
STOCK CONVERSION RATIO.....	26
MANAGEMENT.....	27
HISTORICAL MARKET PRICES OF STOCKS.....	33
CONSIDERATIONS AFFECTING CONSOLIDATION.....	35
RIGHTS OF DISSENTING SHAREHOLDERS.....	36
CONTRACTS AND LEASES OUTSTANDING.....	37
CONTINGENT LIABILITIES.....	38
BY-LAWS OF THE CONSOLIDATED CORPORATION.....	39
FINANCIAL STATEMENTS.....	40
COST OF SOLICITATION, DISCRETIONARY AUTHORITY IN PROXIES.....	40
EXHIBITS:—	
Exhibit "A"—Joint Agreement of Consolidation.....	41
Exhibit "B"—Financial Statements of Operating Companies.....	51
Exhibit "C"—Financial Statements of Non-Operating Companies.....	66
Exhibit "D"—Combined and Consolidated Financial Statements.....	68

This property has been explored principally by one crosscut more than 1,000 feet long. The workings are accessible and are at an elevation of 5,665 feet. It has no surface plant. No exploration work is planned.

Western Union Mining Company

The Western Union Mining Company owns 11 patented claims embracing 220 acres, and 12 unpatented claims of 20 acres each. In addition, it owns twenty dwelling lots in the Western Union Townsite, two miles from Wallace.

This property has been opened up from Revenue Gulch, about two miles northwesterly of Wallace, at an elevation of 2,786 feet. Total workings embrace 21,349 feet. The longest is the No. 4 adit level with 8,237 feet of crosscuts and drifts. None of the workings are accessible. The company has no surface plant. No exploration work is contemplated.

The Western Union mine was subject to intense development work more than twenty years ago, and a substantial tonnage of ore was extracted. However, no extensions of the ore bodies could be discovered, and the operation was then abandoned. It is believed that the Western Union vein does not itself merit further development, but there is a large unexplored area covered by the unpatented Western Union claims to the north which may some day deserve exploration.

Crystal Lead Mines Company

This company owns nine patented claims embracing 181 acres on West Eagle Creek, about 30 miles north of Wallace by road.

The Crystal Lead Mine is located in a shear zone which may be correlated with the Jack Waite deposit, lying three to four miles to the southeast. The vein strikes about N. 35° W. and dips southwesterly at 70 - 80°. It has been explored underground for a length of about 1,000 feet and to a depth of approximately 700 feet from the surface. To date, only one oreshoot has been located 100 - 150 feet in length and about 400 feet in height.

The wall rocks are sediments of the Lower Burke and Upper Prichard formations, only slightly deformed by folding or faulting. Alteration is limited to the immediate of the veins. The vein mineralization consists of quartz and calcite with pyrite, galena, and a little sphalerite. The occurrence of commercial values is erratic, and the silver-lead ratio is low. The ore, however, is a very easy one to mill, producing a fine grade of concentrate.

In 1946, development work consisted of 657 linear feet of drifting, and 281 feet of raising. Including those of the previous year, the results have been disappointing in that the vein as far as explored, failed to reveal either horizontal or vertical extensions of the known ore body. Production last year was 2,885 tons of milling ore averaging 2.5 ounces silver; 8.8% lead; and 1.3% zinc. Ore reserves at the end of 1946 were about one-third of that tonnage.

Future ore possibilities are considered as speculative, based upon experience in the past. The ore body which is being mined, consists of a number of small lenses, which may or may not be repeated in the future. The property is considered a very good prospect. During the summer of 1947 further exploration will be conducted by extending drifts southeasterly and northwesterly along the vein on the No. 4 level.

Treasure Vault Mining Company

This company owns four patented, and three unpatented claims in Placer Center Mining District, Shoshone County, Idaho, totalling 102.261 acres. The property is located four miles north of Wallace, on the east side of Nine Mile Gulch, at an elevation of 3,546 feet. The principal level is about 450 feet long, and is accessible at present.

The Treasure Vault vein lies east of the Dobson Pass Fault, in country rock belonging to the Prichard formation. In recent years lessees have made small shipments from the shallow workings near the surface. The principal values were in zinc, but carried subordinate amounts of lead and silver. Further exploration of this vein will be justified some time in the future. The company has no surface plant.

Aurum Mining Company

The property of this company consists of 73 patented claims, and 20 patented lots, aggregating 1,193.18 acres, and one unpatented claim. At the end of 1946, two shareholders had advanced funds to the Aurum Company totalling \$147,718.55.

The Aurum Mining Company was formed to take over in 1927 the Republic mines department of the Northport Smelter and Refining Company. The latter corporation had operated a lead smelter at Northport, Washington, owned by the Hercules and Tamarack companies. It had purchased several gold mines at Republic in order to provide siliceous flux to reduce lead ores and concentrates in the smelting process. When the Northport Smelter was sold, and the company disincorporated, the Aurum company was formed to preserve the assets at Republic. In the course of the last nineteen years, mineral acreages in the Republic district have been very greatly expanded. At present, with exception of the holdings of one large operating company, the Aurum owns practically all of the known mineral-areas at Republic.

When the Northport Smelter was sold in 1922, the purchaser, American Smelting & Refining Company, assumed a contingent obligation to pay to the Northport Company (or its successor, now the Aurum Mining Company) \$1.00 per dry ton for the lead product of the Hercules, Tamarack and Sherman mines. This agreement is still in effect and expires only when a certain tonnage has been shipped by the mines. At the beginning of 1947, this contingent obligation, a credit to the Aurum company, amounted to a minimum of \$142,011.81 depending on the performance of the mines and the construction of the contract.

Aurum — Production

Despite the fact that World War II was an unsatisfactory period in which to mine gold, the Aurum company has maintained a nominal production, principally through the efforts of lessees, for the past five years. The following tabulation shows the dry tons shipped, and the average previous metal content:

Year	Tons	Oz. Gold	Oz. Silver
1942	12,479	.23	1.35
1943	6,077	.19	1.04
1944	24,657	.25	1.38
1945	11,459	.32	1.49
1946	5,822	.28	1.46

None of the lessees' production was from ore bodies included in the company's ore reserves, unless such inclusion were by nature, poorly situated for company operation. Consequently lessees have not extracted high grade blocks included in measured and indicated tonnage.

Aurum — Ore Reserves

The ore reserves of the Aurum company have been substantially unchanged in recent years due to the limited amount of exploration work done by the company. Progress has been almost nil because of unfavorable economic factors effecting U. S. gold mining. The

ANNUAL REPORT

DAY MINES, INC.

For the Year Ending December 31, 1947

Incorporated Under Laws of Idaho

GENERAL OFFICES

Wallace, Idaho

OFFICERS

HENRY L. DAY, President and Manager
F. M. ROTHROCK, Vice President
PAUL B. JESSUP, Vice President and Comptroller
S. F. HEITFELD, Secretary and Treasurer
R. W. ANNO, Asst. Secretary and Asst. Treasurer

DIRECTORS

ELEANOR DAY BOYCE, Wallace, Idaho
HENRY L. DAY, Wallace, Idaho
WRAY D. FARMIN, Spokane, Washington
PAUL B. JESSUP, Wallace, Idaho
C. I. PAULSEN, Spokane, Washington
F. M. ROTHROCK, Spokane, Washington
F. W. ROTHROCK, Spokane, Washington

TRANSFER OFFICE - - DAY BLDG., WALLACE, IDAHO

Manager's Report

Wallace, Idaho

March 8, 1948

TO THE STOCKHOLDERS OF
DAY MINES, INC.

Herewith please find report and financial statements for the calendar year 1947, covering the operations of Day Mines, Inc., and its twelve predecessor companies. The combined production of silver, lead and zinc increased from that of the previous year as more workers were available. The combined net operating profit of all the companies, parties to the consolidation of October 1, 1947, after all deductions including state and federal income taxes, was \$654,667.01 during the past year; it was \$898,292.75 before depletion. Cash amounted to \$920,341.53 on December 31, 1947, and current assets exceeded current liabilities by \$1,382,736.72. The ratio of current assets to current liabilities was 3.2 to 1.

CONSOLIDATION—Day Mines, Inc. came into corporate existence on October 1, 1947, being a statutory consolidation of twelve mining companies, all owning mineral properties in the Coeur d'Alene Mining District of Northern Idaho. In meetings specially called for the purpose, the shareholders of each of the predecessor companies voted on September 23 and 24, 1947, by more than two-thirds majorities in favor of the consolidation. At the twelve meetings there were a total of 20,713,614½ shares eligible to vote; 17,931,469 shares were present in person or by proxy. Of the 20,713,614½ shares, 86.19% voted in favor of the consolidation, and only 0.38% in opposition. As a result, all assets and liabilities of the twelve old companies were assumed by Day Mines, Inc. on October first, and the predecessor corporations were legally dissolved the same day. Exchange ratios for the old stocks into the new were also established at the shareholders' meetings. For each 1,000 shares of the predecessor company, the old stockholders were entitled to receive the following number of Day Mines, Inc. shares:

Tamarack & Custer Cons. Mng. Co.....	164
Hercules Mining Co.....	692
Sherman Lead Co.....	168
Dayrock Mining Co.....	340
Monitor Mining Co.....	212
King Mining Co.....	60
Stanley Mining Co.....	8
Duluth Mining Co.....	12.5
Happy Day Mining Co., Ltd.....	7
Western Union Mining Co.....	6
Crystal Lead Mines Co.....	21
Treasure Vault Mining Co.....	6

On March 1, 1948, Day Mines, Inc. had 2,149 shareholders of record. In addition, there were 397 shareholders of the twelve old companies who had not yet surrendered their old shares for conversion into certificates of Day Mines, Inc. at the foregoing ratios. However, 99.08% of the old shareholdings have done so. The management urges the others to do so immediately, as the exchange is necessary in order for them to receive the 10c per share dividend payable January 31, 1948.

DIVIDENDS—In June, 1947, three of the predecessor corporations declared dividends to their shareholders. The Dayrock paid \$43,680.72, at the rate of 2½c per share; the Sherman disbursed \$73,500.00, at the rate of 2c per share; and the Tamarack paid \$50,000.00 at the rate of 1c per share. All of these dividends were paid from current earnings, and were fully taxable to stockholder recipients.

Day Mines, Inc. paid its first dividend on January 31, 1948, of 10c per share, aggregating \$288,657.50. This dividend was declared on November 13, 1947, and made payable to stockholders of record on January 3, 1948. A portion of this dividend was charged to current earnings and the balance to capital surplus. The status of this dividend from the standpoint of its taxability to the shareholders has not been determined at the present time. When it is, stockholders will be advised.

Dividends declared by all the companies totalled \$455,838.22 in 1947. At the present time the management has no fixed policy with respect to the declaration of regular dividends. These will be paid in the future as justified by earnings, after setting aside prudent amounts for capital expenditures (new properties, new equipment, exploration work) and for additional working capital.

EXPLORATION AND DEVELOPMENT—Progress was at an accelerated pace last year, appreciably above the substantial totals of 1946. To a considerable extent, the 1947 program was underwritten through exploration funds made available by the Office of the Premium Price Plan for Copper, Lead and Zinc operating under order No. 137 of the Office of Economic Stabilization, issued in September, 1946. Federally aided exploration projects were terminated December 31, 1947. In addition, Day Mines, Inc. and the majority of its twelve predecessor companies (treated in this paragraph as a single entity for calendar 1947), made substantial expenditures in the search for new and additional ore bodies.

The 800 level, present bottom one in the Dayrock mine, was extended westerly 1,335 feet to the Murray fault and 1,320 feet of diamond drilling performed east thereof. The Nipsic crosscut on Interstate No. 4 level (now re-named the 1500) was extended 2,745 feet northerly to intersect two Silver Tip veins near the end of 1947. The Carlisle vein was explored in 1947 by deepening the shaft 145 feet, drifting a total of 470 feet on a new lower level (the 3250), and by extending drifts northerly and southerly on the main haulage level (the 2800) a total of 549 feet. On the Idora No. 3 level (the 1400) the drift on the Tuscumbia vein system was driven 907 feet easterly, and 1,257 feet of the work difficult. Further exploration to the east is planned for 1948. A portion of the area intervening between the Sherman and Tamarack mines was explored by crosscutting and drifting a total of 1,050 feet to the west of and from the Sherman 1,000 level. Only about 60% of the original project was completed. From the 2400 level of the Tamarack mine an off-set, vertical shaft was sunk 300 feet. Drifting on the 2700 level, the deepest in the mine, will be completed in 1948. No additional ore bodies were developed in 1947 either on the Crystal Lead vein, or on the Fairview vein in the present Hercules Group. The latter (one of the old Humming Bird veins) is now regarded as worked out. An extensive geological reconnaissance of the King Area, running from Burke southeasterly over the Mullan divide toward the Snowstorm mine, was started in the spring of 1947 and will be completed about July, 1948. Unwatering of the Hercules

shaft, 1200 feet deep, and located nearly two miles underground, was commenced in the third quarter of 1947. At present, unwatering has reached the 1000 level, and a new 500 gallon per minute pump has been installed thereon. The 1000 was the lowest operating level in the old mine. The vein will be initially explored in 1948 by deep diamond drilling from the 1200 level.

The following tabulation is a summary of the progress of the exploration and development work during the past five years. For comparison purposes, the 1947 figures apply to the calendar year at each property without regard to the consolidation of last October first. The totals for 1943, 1944, 1945 and 1946 show the progress of the predecessor companies of Day Mines, Inc.

	Drifting	Cross cutting	Raising	Sinking	Diamond Drilling	Stations & Pockets
1943	7,356 ft.	3,113 ft.	1,345 ft.	436 ft.	11,802 ft.	29,598 cu. ft.
1944	7,151	2,431	2,881	....	7,938	.....
1945	4,179	1,203	2,129	784	3,873	68,411
1946	7,787	4,998	3,638	....	4,587	38,418
1947-Dayrock	2,562	1,093	922	....	4,545	.....
Monitor	4,274	3,475	1,218	145	1,969	36,281
Sherman	1,091	388	517	....	150	.....
Tamarack	 837	788	1,802	373	829	32,775
Crystal Lead	 650	88	.....	....	181	.....
Hercules-Fairview	 87	.....	66	....	1,133	.....
	9,501	5,832	4,525	518	8,807	69,056

ORE RESERVES—These were estimated to aggregate 1,033,918 tons on December 31, 1947, in the four principal mines, as contrasted to 906,264 tons twelve months previously. The increase was chiefly due to the favorable development of the Dayrock in 1947, although there were other substantial contributing factors. Estimates embrace only the "measured" and "indicated" classifications as defined by the U. S. Bureau of Mines, following accepted standards. Such estimating involved prediction of metal prices as well as production costs over a four to five-year period in the future.

PRODUCTION—The output of the mines in 1947 increased in tonnage as more underground workers became available. The following tabulation shows the average grade and tonnage of the company account ore milled during the past five years by the predecessor companies of Day Mines, Inc. For 1947, a breakdown by mines is given for the calendar year. Inasmuch as at the present time it is economically desirable to recover zinc concentrates only from Tamarack and Monitor milling ores, the zinc figures apply only to such production. In 1947 the Tamarack company reclaimed and treated in the Dorn concentrator a modest tonnage of old tailings which had been deposited on its own property. Figures follow:

	Dry Tons	Silver	Lead	Tons Milled From Which Zinc Recovered	Recoverable Zinc
1943	225,684	3.0 oz.	5.7%	142,923	7.8%
1944	222,325	2.6	5.0	157,013	6.7
1945	188,136	2.5	4.5	131,115	6.0
1946	155,363	2.0	4.2	105,761	5.5
1947-Dayrock	46,363	3.1	5.3		
-Hercules (Fairview)	11,163	5.3	7.9		
-Monitor	64,190	.8	2.0	64,190	5.0
-Sherman	33,678	9.1	13.3		
-Tamarack	65,518	1.1	3.3	65,518	4.7
	220,912	2.9	5.1	129,708	4.9
-Tamarack-Tailings	20,059	2.5	3.2	20,059	3.7

The gross contents of the ores milled by the various companies during the past five calendar years are tabulated herewith. The annual figures for pounds of recoverable zinc apply only to those tonnages from which zinc concentrates were made in the mills.

	Silver Oz.	Lead Lb.	Recoverable Zinc Lb.
1943	679,984	25,822,040	22,298,689
1944	580,159	22,268,130	21,014,174
1945	464,834	17,016,001	15,811,080
1946	314,049	12,933,120	11,708,960
1947-Dayrock	145,677	4,933,284	
-Hercules (Fairview)	 59,455	1,769,102	
-Monitor	 51,188	2,560,018	6,425,950
-Sherman	306,117	8,941,890	
-Tamarack	 74,431	4,378,024	6,190,968
	636,868	22,582,318	12,616,918
-Tamarack-Tailings	 49,951	1,276,360	1,498,148

LEASING—Five underground leasers produced a total of 19,820 dry tons of milling ore in 1947. Zinc concentrates were made from 18,303 tons. The average grade was 1.4 ounces silver per ton, 3.5 per cent lead, and 4.7 per cent recoverable zinc. The gross content of the ore concentrated was 27,918 ounces of silver, 1,399,440 pounds of lead, and 1,707,714 pounds of recoverable zinc.

Five surface leasers produced 13,079 dry tons of milling ore from old dumps and tailings deposits. Zinc concentrates were made from 7,924 tons of such material. The average grade was 1.3 ounces silver per ton, 1.8 per cent lead,

and 2.2 per cent recoverable zinc. The gross content of the ore concentrated was 17,063 ounces of silver, 465,430 pounds of lead, and 351,708 pounds of recoverable zinc.

Royalties paid by the leasers in 1947 amounted to \$41,359.84. The leasers' output declined slightly from the 1946 totals. This is probably due to the termination of the Premium Price Plan on June 30, 1947, and subsequent lower net prices for zinc.

METAL PRICES—The following table gives the average quotations during the past five years of the three metals produced by Day Mines, Inc. The silver figures are the average prices paid by the United States Treasury for newly-mined domestic metal, while the lead prices are the New York quotations, and the zinc prices are based on the St. Louis market.

Year	Silver Per Oz.	Lead Per Lb.	Zinc Per Lb.
1943	70.625c	6.50c	8.25c
1944	70.625	6.50	8.25
1945	70.625	6.50	8.25
1946	80.56	8.11	8.73
1947	90.00	14.67	10.50

Under the law of July, 1946, the Treasury continued to buy silver produced in the United States at the official price of 90½c per ounce less handling charge. Following the removal of O. P. A. controls in November, 1946, the price of lead advanced to 12.55c at the start of 1947, and to 15.00c early in March, 1947, which has been the quotation ever since. There is a world scarcity of lead at the present time. While the price is now at the highest in history, it is very firm. Zinc was quoted at 10½c per pound in St. Louis all during the past year. United States zinc consumption was in excess of production, which caused a price increase to 12c on January 20, 1948. This quotation should hold until more zinc is available to consumers.

The Premium Price Plan for Copper, Lead and Zinc—an aftermath of the scheme used during World War II to stimulate the production of these three metals—expired June 30, 1947. Hardship was caused to those producers dependent on high zinc prices. Congress enacted a law in July, 1947, extending the Premium Price Plan, little changed, for one year. The measure was promptly vetoed by President Truman, contrary to the expectation of the mining industry. New legislation will be introduced during the present session of Congress. It is now impossible to predict its exact nature or likelihood of enactment into law.

CAPITAL ADDITIONS—Total expenditures for capital purposes in 1947 of Day Mines, Inc. and twelve predecessors, totalled \$578,886.14. Substantial capital expenditures were made last year for the Tamarack 2400 level offset shaft, the deepening of the Carlisle shaft, the completion of a vertical working raise between the Amazon 2000 and 2800 levels, and the unwatering of the Hercules mine. At the end of 1947, the capacity of the Carlisle mill was being increased from 215 tons daily to 490 tons; a lead oxide flotation circuit was being installed in the Sherman mill; and a worn-out ball mill in the Hercules concentrator was being replaced by a used but serviceable unit. Boarding houses at the Sherman mine in Burke and at the Interstate property were equipped and put into service last December. The Mace Power Plant was purchased from Citizens Utilities Co. Substantial expenditures were made for new machinery and equipment for the various mines.

SUBSIDIARIES—The Fern Mining Company, wholly owned by Day Mines, Inc. during 1947, was organized under the laws of Idaho, February 18, 1946. The corporation was non-productive last year, and the development expense was limited to \$1,550.16, mostly for geological work. The Fern company owns 81 unpatented claims aggregating 1554.67 acres, lying southerly and easterly of Osburn at the headwaters of Shields and Lake Gulches. Eighty of the claims are in one contiguous group.

The Aurum Mining Company, a second wholly owned Day Mines, Inc. subsidiary, not only maintained its gold properties near Republic, Washington, but performed successful development work. The major portion of the production came from three leasers, active through all of 1947, who paid the company \$20,774.50 in royalties. The output was shipped direct to a custom smelter as crude silicious ore, and aggregated:

Dry Tons	Grade	Content
14,951.4	0.244 oz. gold	3,643.7 oz. gold
	1.26 oz. silver	18,785 oz. silver

During 1947 the Ben Hur 600 level drift was extended 189 feet northerly, and then turned to crosscut the South Cross vein, which was intersected by 604 feet of work. At the end of the year, drifts on the South Cross vein had been extended a total of 134 feet northerly and southerly. This work and its continuation early in 1948 have indicated a substantial tonnage of better than average grade.

The tonnage of the Aurum ore reserves declined about 5% in 1947, while the gold grade increased about 10%. This is due to the fact that estimated future operating costs had to be increased which raised the cut-off grade, and eliminated a substantial amount of low-grade material, previously considered commercial.

The Aurum company maintained its properties during 1947 at a loss of \$4,784.40, before depletion. In addition, net capital expenditures amounted to \$44,769.22, which with one exception was all for the exploration of the South Cross vein from the Ben Hur 600 level. The exception was \$5,200 spent for the purchase of additional mineral property.

GENERAL—The Hercules mill operated rather steadily as well as profitably during 1947 on a custom basis. Until last July when President Truman vetoed the one-year extension of the Premium Price Plan bill, operations were at near capacity on freshly broken ore. Since then, screened river tailings have furnished the bulk of the material concentrated.

Day Mines, Inc. has a one-fourth participating interest in a long-term lease on the Galena property held by the American Smelting and Refining Company. The Galena property, a mile west of Wallace, is now owned by the Vulcan Silver-Lead Corporation, a subsidiary of the Callahan Zinc Lead Company. The project contemplates deepening the

Galena shaft more than 2000 feet vertically to approximate sea level, and 5000 feet of crosscutting and drifting at that elevation. This work was started in 1947 with the installation of a large compressor, suitable double drum hoist, surface buildings, and the rehabilitation of the old shaft to the sump, 840 feet below the collar. The shaft work included the addition of a fourth compartment to be used for ventilation. By March 1, 1948, the shaft had been deepened about 200 feet. Day Mines, Inc. expenditures in 1947, account of its quarter interest in the Galena project, amounted to \$61,006.89.

In January, 1947, "portal" pay suits were filed against several of the predecessor companies in the total of \$615,091. The cases were tried in the district federal court in Coeur d'Alene last November. The following month Judge Chase A. Clark decided the cases should be dismissed if pleadings were not amended. A judgment of dismissal was entered February 20, 1948, which is subject to appeal if made within three month of that date.

A new labor contract was negotiated in the summer of 1947 and is effective until June 30, 1949, except that the matter of wages can be re-opened on June 30, 1948. It provided for an increase of \$1.00 per shift and six paid holidays. The average daily wage paid to all wage-earners including shift differentials, overtime, vacations and holidays, is now about \$11.89.

The number of employees increased substantially last year as the labor supply showed a marked improvement. On Day Mines, Inc. payrolls, on December 31, 1947, there were 569 employees of all classifications, an increase of 116 during the year. Approximately two-thirds were working underground. Turn-over continued very high as hires and separations in 1947 ran in excess of 1,300 and 1,200 respectively. At present only experienced miners are being employed.

Day Mines, Inc. shares were traded in as "unlisted" by the Spokane Stock Exchange from October 1, 1947, to February 25, 1948, with the approval of the Securities and Exchange Commission. On the latter date, Day Mines, Inc. shares were admitted to "listed" trading, and Dayrock, Sherman and Tamarack were no longer called. Further Day Mines, Inc. listing is under consideration, and will be applied for when opportune.

OUTLOOK—The Day Mines, Inc. properties are well equipped, both surface and underground, and in a position to take advantage of high prices for lead and zinc. However, a substantial portion of the ore reserves are low to medium in grade, and due to present high costs, this tonnage requires high prices for profitable extraction. The management anticipates a high rate of capital expenditures during the next few years as several exploration projects are now in the formulative stage, in addition to the unwatering of the Hercules mine, and the one-fourth interest in the deep development at the Galena shaft.

This opportunity is taken to thank all employees, whose loyal and efficient services made the 1947 results possible. Particular appreciation is accorded to those who participated in the unusual work required by the consolidation.

Respectfully submitted,
HENRY L. DAY,
President and Manager.

Auditor's Certificate

Day Mines, Inc.

Wallace, Idaho
March 6, 1948

To the Board of Directors
Day Mines, Inc.
Wallace, Idaho
Gentlemen:

We have examined the balance sheet and statement of surplus of Day Mines, Inc., as at December 31, 1947, and the combined statement of profit and loss of the predecessor corporations and the Day Mines, Inc. for the year then ended, have reviewed the system of internal control and the accounting procedures of the company and, without making a detailed audit of the transactions, have examined or tested accounting records of the company and other supporting evidence, by methods and to the extent we deemed appropriate. Our examination was made in accordance with generally accepted auditing standards and included all procedures which we considered necessary in the circumstances.

The investments in subsidiaries are not consolidated into the balance sheet of the Day Mines, Inc. for the reason that the subsidiaries are in the development stage and the book values of the property, plant, and equipment of these companies have no relation to actual value, which can only be determined from future exploration. The investments in these companies are carried at cost, and current accounts with them are shown in the balance sheet.

In our opinion the accompanying comparative balance sheet and related comparative statements of income and surplus and the notes thereon present fairly the position of Day Mines, Inc. at December 31, 1947, and the results of operations for the fiscal year then ended in conformity with generally accepted accounting principles.

Yours very truly,
L. J. RANDALL,
Certified Public Accountant

DAY MINES, INC.
CONDENSED BALANCE SHEET

December 31, 1947

ASSETS

CURRENT ASSETS:

Cash on Hand and in Banks	\$ 920,341.53
Bond Investments @ Cost (Market \$263,314.40)	253,560.61
Amounts due from Smelters for Concentrates Shipped	470,808.69
Concentrates on Hand @ Market value	12,930.09
Receivables and Prepaid Expenses	52,051.13
Inventory of Mine and Mill Supplies at Cost	309,406.50

TOTAL \$2,019,098.55

INVESTMENTS:

Stock of Subsidiary Companies @ Cost	490,477.53
Advances to Subsidiary Companies	196,326.56
Stock of Other Companies @ Cost	88,376.02
Other Investments	9,369.00

TOTAL 784,549.11

MINING PROPERTIES, PLANT & EQUIPMENT:

Operating Mining Properties:	
Mining Claims and Ore bodies (after deducting Reserve Plant, Equipment, Deferred Mining Costs, for Depletion)	1,560,941.12
Furniture and Fixtures (after deducting Reserve for Depreciation)	1,131,372.02

TOTAL 2,692,313.14

Non Operating Mining Properties:

Claims and Mining Properties	1,869,147.21
Exploration Costs and Other Interests	241,905.15

TOTAL 2,111,052.36

TOTAL ASSETS \$7,607,013.16

LIABILITIES

CURRENT LIABILITIES:

Accounts Payable	\$ 157,348.09
Wages and Salaries Payable	101,499.62
Taxes Payable	78,584.34
Dividend Payable	288,657.50
Exploration Premiums Unexpended	10,272.28

TOTAL \$ 636,361.83

CAPITAL STOCK (Authorized—5,000,000 shares
par value 10c per share)

Capital Stock Issued and Outstanding
(2,886,575 shares, par value 10c per
share) 288,657.50

SURPLUS: (See Statement of Surplus)

Capital Surplus	6,681,993.83
Earned Surplus	.00

TOTAL 6,681,993.83

TOTAL LIABILITIES \$7,607,013.16

FOOTNOTE: No provision has been made for possible liability for additional compensation to employees under the "portal to portal" suits which have been dismissed, and for additional federal income taxes that might arise out of the Tamarack & Custer Consolidated Mining Company's depletion controversy with the Bureau of Internal Revenue.

DAY MINES, INC. AND ITS PREDECESSOR CORPORATIONS
PROFIT & LOSS STATEMENT FOR YEAR ENDING DECEMBER 31, 1947

	PREDECESSOR CORPORATIONS 9 MOS. ENDING 9-30-47	DAY MINES, INC., 3 Mos. ENDING 12-31-47	COMBINED 12 MONTHS ENDING 12-31-47
OPERATING INCOME:			
Revenue from Ore Sales	\$2,689,972.08	\$886,893.12	\$3,576,865.20
Royalties from Lease Operations	37,872.42	3,487.42	41,359.84
Profit from Custom Milling	12,450.28	7,466.91	19,917.19
TOTAL	\$2,740,294.78	\$897,847.45	\$3,638,142.23
OPERATING EXPENSES:			
Ore Breaking	\$1,067,012.49	\$402,206.50	\$1,469,218.99
Development	131,734.55	29,562.83	161,297.38
Milling	293,740.13	87,724.72	381,464.85
Hauling Ores, Concentrates and Tailings	56,504.52	16,738.38	73,242.90
Office, Administrative and General:			
Salaries	53,403.40	29,054.17	82,457.57
Property Taxes	23,620.66	8,631.86	32,252.52
Other	58,494.08	29,462.03	87,956.11
TOTAL	\$1,684,509.83	\$603,380.49	\$2,287,890.32
OPERATING PROFIT	1,055,784.95	294,466.96	1,350,251.91
OTHER INCOME AND EXPENSE (NET)	40,005.08	14,035.97	54,041.05
NET PROFIT BEFORE DEPLETION, DEPRECIATION AMORTIZATION AND INCOME TAXES	\$1,095,790.03	\$308,502.93	\$1,404,292.96
DEPLETION, DEPRECIATION AND AMORTIZATION:			
Depletion	\$ 208,687.81	\$ 34,937.93	\$ 243,625.74
Depreciation and Amortization	134,575.59	39,135.41	173,711.00
TOTAL	\$ 343,263.40	\$ 74,073.34	\$ 417,336.74
NET PROFIT BEFORE INCOME TAXES	\$ 752,526.63	\$234,429.59	\$ 986,956.22
INCOME TAXES:			
State Income	\$ 32,660.61	\$ 10,140.01	\$ 42,800.62
State Mine License	13,007.92	3,704.09	16,712.01
Federal Income	224,258.09	48,518.49	272,776.58
TOTAL	\$ 269,926.62	\$ 62,362.59	\$ 332,289.21
NET PROFIT	\$ 482,600.01	\$172,067.00	\$ 654,667.01

DAY MINES, INC.
STATEMENT OF SURPLUS DECEMBER 31, 1947

CAPITAL SURPLUS:

Surplus at date of Organization—	
October 1, 1947	\$6,800,264.46
Additions for Year	None
Deductions for Year:	
Monitor Royalty Adjustment	\$ 1,680.13
Portion of Dividend No. 1	116,590.50
CAPITAL SURPLUS—December 31, 1947	\$6,681,993.83

EARNED SURPLUS:

Additions for year: Net Profit	\$ 172,067.00
Deductions for Year: Portion of Dividend No. 1	172,067.00
EARNED SURPLUS—December 31, 1947	\$.00

FOOTNOTE: The excess earnings of the predecessor corporations over the dividends paid by such corporations during the nine months ending September 30, 1947 were reflected in the capital surplus of Day Mines, Inc. The combined earnings of Day Mines, Inc., and its predecessor corporations for the year amounted to \$654,667.01. The total dividends declared by Day Mines, Inc. and its corporate predecessors for the year 1947 amounted to \$455,838.22, leaving an excess of earnings over dividends on a combined basis of \$198,828.79.

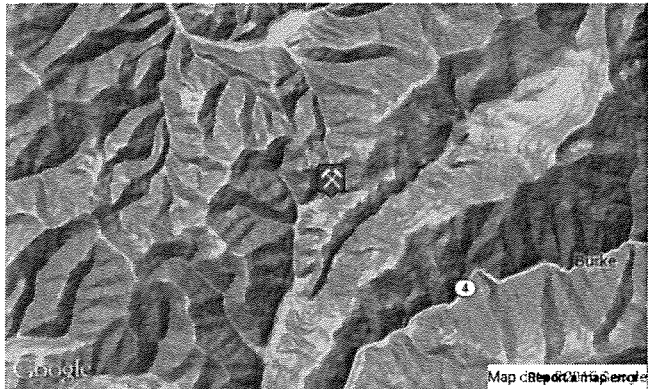
Treasure Vault Mine

Location: Shoshone County, Idaho

All mine locations were obtained from the USGS Mineral Resources Data System. The locations and other information in this database have not been verified for accuracy. It should be assumed that all mines are on private property.

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State: Idaho
County: Shoshone
Elevation: 3,560 feet (1,085 meters)
Latitude: 47.5311
Longitude: -115.88830
Primary: Silver

AdChoices > Mining Claims Gem Mining Gold Mining In Mine Geology

Treasure Vault Mine MRDS Details

Plasma Bevel Cutting

CNC plasma & oxyfuel bevel machine Contact Messer Cutting Systems



All data originates from the USGS Mineral Resource Data System.

Site Name	Commodity	Location
Primary: "Treasure Vault Mine"	Primary: Silver Secondary: Lead Secondary: Zinc	State: Idaho County: Shoshone District: Placer Center
Land Status	Holdings	Workings
Land Ownership: Private Administrative Organization:		Type: Underground
Ownership	Production	Deposit
Owner Name: Day Mines, Inc. Company ID: Percent: Home Office: Info Year: Years: -		Record Type: Site Operation Category: Past Producer Deposit Type: Vein Plant Type: Plant Subtype: Operation Type: Underground Mining Method: Milling Method: Year First Production: 1941 Year Last Production: Discovery Year: Discovery Method: Unknown Years of Production: Organization: Significant: N Deposit Size: S

About The MRDS Mines Database

The Western Mining History database of mines is currently in beta form. The database uses the full USGS Mineral Resources Data System (MRDS) database. More information about this section will be posted soon.

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Physiography

General Physiographic Area: Rocky Mountain System
 Physiographic Province: Northern Rocky Mountains
 Physiographic Section:
 Physiographic Detail: Coeur D'Alene Mountains

Mineral Deposit Model**Orebody**

Name:
 Form: TABULAR, REPLACEMENT,
 FISSURE VEIN

Structure**Alterations****Rocks**

Name: Argillite
 Role: Host
 Description:
 Age Type: Host Rock Unit
 Age in Years:
 Dating Method:
 Material Analyzed:
 Age Young: Neoproterozoic
 Age Old:
 Name: Argillite
 Role: Host
 Description:
 Age Type: Host Rock
 Age in Years:
 Dating Method:
 Material Analyzed:
 Age Young: Neoproterozoic
 Age Old:

Analytical Data**Materials****Comments**

Comment Type: **Comment** Head of Ninemile Creek.
 Location

Comment Type: **Comment** 4 Patented Claims
 Development

Comment Type: **Comment** Depths To Top, Bottom Expressed In Elevation
 Deposit

Comment Type: **Comment** Length Workings A 1960 Figure
 Workings

Comment Type: **Comment** 8-75 Crosby (Unpublished Report) Shows 500 Short Tons Production From the Treasure Vault Mine Averaging 1.0 Oz Ag Per Ton, 3. and 8.0 % Zn. 12-75 Griggs (1952) Shows Production As 50 Short Tons With of 50 Oz Ag, 3,428 Lbs Pb, and 8,790 Lbs Zn.
 Production

References

Reference Category: **Reference:** Hobbs, S. W., And Others, 1965 , Geology Of The Coeur D'Alene District, Shoshone County, Idaho: USGS Prof. Paper 478 , 139 P.
Pages: **URL:**

Reference Category: **Reference:** Crosby, 1969, Colorado School Of Mines Quarterly, V. 64, No. 1, P. 189-194
Production **URL:**
Pages:

Reference Category: **Reference:** Fletcher, G. D., 1960 , 61st Annual Report Of The Mining Industry Of Idaho For 1960 , P. 67
Deposit **URL:**
Pages:

Reference Category: **Reference:** Griggs, A. B., 1952 , Geology And Notes On Ore Deposits Of Canyon - Nine Mile Creeks Area, Shoshone County, Idaho: USGS Open File Rept., 108 P.
Deposit **URL:**
Pages:

Reference Category: **Reference:** 1952 Geolmap A. B. Griggs, Open - File Rept.
Deposit **URL:**
Pages:

Reference Category: **Reference:** 1960 Other State Mine Inspector'S 61st Ann. Rept.

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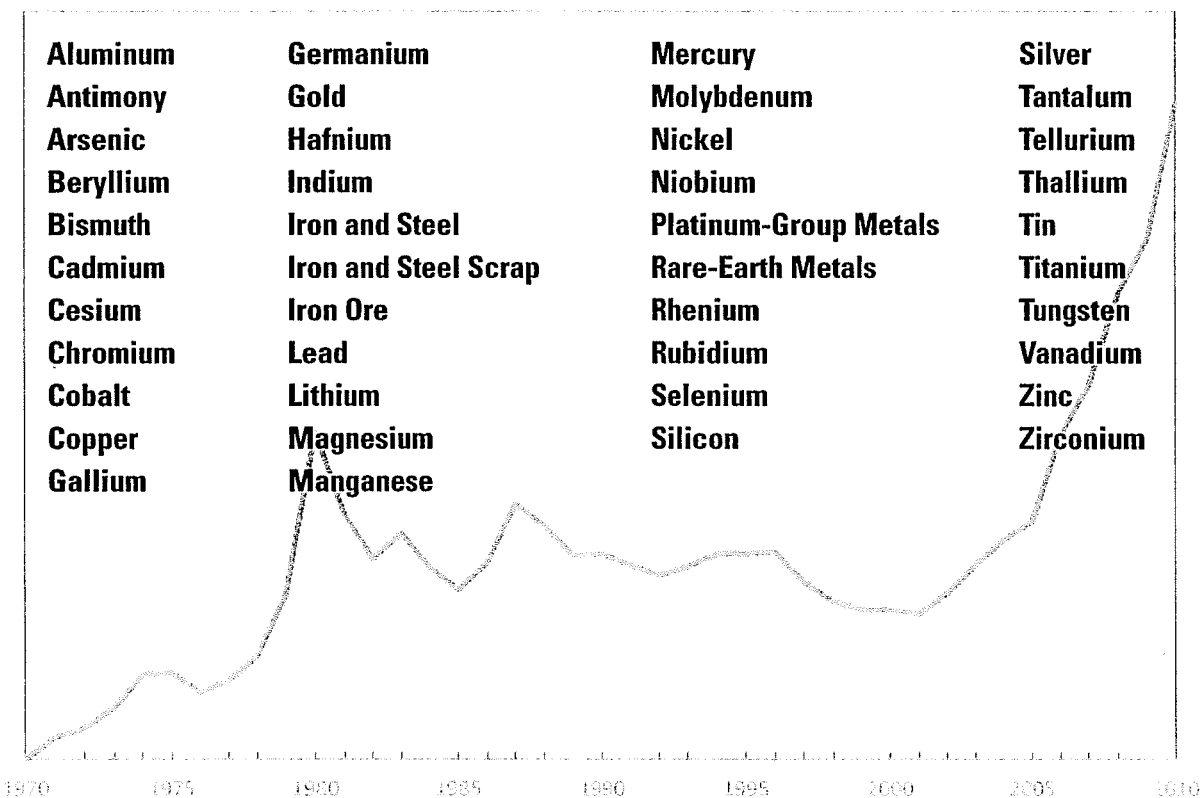
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Metal Prices in the United States Through 2010



Scientific Investigations Report 2012–5188

Metal Prices in the United States Through 2010

By U.S. Geological Survey National Minerals Information Center staff

Scientific Investigations Report 2012–5188

U.S. Department of the Interior
U.S. Geological Survey

U.S. Department of the Interior
KEN SALAZAR, Secretary

U.S. Geological Survey
Marcia K. McNutt, Director

U.S. Geological Survey, Reston, Virginia: 2013

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Suggested citation:

U.S. Geological Survey, 2013, Metal prices in the United States through 2010: U.S. Geological Survey Scientific Investigations Report 2012–5188, 204 p., available only at <http://pubs.usgs.gov/sir/2012/5188>.

50 Metal Prices in the United States Through 2010

Table 1. Annual average U.S. producer copper price.

[Values in cents per pound]

Year	Price	Year	Price	Year	Price	Year	Price
1850	22.00	1891	12.80	1932	5.79	1973	59.49
1851	17.00	1892	11.60	1933	7.28	1974	77.27
1852	22.00	1893	10.80	1934	8.66	1975	64.16
1853	22.00	1894	9.50	1935	8.88	1976	69.59
1854	22.00	1895	10.70	1936	9.71	1977	66.77
1855	27.00	1896	10.80	1937	13.39	1978	65.81
1856	27.00	1897	11.29	1938	10.22	1979	92.19
1857	25.00	1898	12.03	1939	11.20	1980	101.31
1858	23.00	1899	16.70	1940	11.53	1981	84.21
1859	22.00	1900	16.19	1941	12.00	1982	72.80
1860	23.00	1901	16.10	1942	12.00	1983	76.53
1861	22.00	1902	11.63	1943	12.00	1984	66.85
1862	22.00	1903	13.20	1944	12.00	1985	66.97
1863	34.00	1904	12.80	1945	12.00	1986	66.05
1864	47.00	1905	15.60	1946	14.04	1987	82.50
1865	39.20	1906	19.30	1947	21.27	1988	120.51
1866	34.20	1907	20.00	1948	22.32	1989	130.95
1867	25.40	1908	13.20	1949	19.50	1990	123.16
1868	23.00	1909	13.11	1950	21.58	1991	109.33
1869	24.20	1910	12.88	1951	24.50	1992	107.42
1870	21.20	1911	12.55	1952	24.50	1993	91.56
1871	24.10	1912	16.48	1953	29.05	1994	111.05
1872	35.60	1913	15.52	1954	29.94	1995	138.33
1873	28.00	1914	13.31	1955	37.51	1996	109.04
1874	22.00	1915	17.47	1956	42.00	1997	106.92
1875	22.70	1916	28.46	1957	30.17	1998	78.64
1876	21.00	1917	29.19	1958	26.31	1999	75.91
1877	19.00	1918	24.68	1959	30.99	2000	88.16
1878	16.60	1919	18.19	1960	32.34	2001	76.85
1879	18.60	1920	17.50	1961	30.32	2002	75.80
1880	21.40	1921	12.65	1962	31.00	2003	85.01
1881	19.20	1922	13.56	1963	31.00	2004	134.20
1882	19.10	1923	14.75	1964	32.35	2005	173.57
1883	16.50	1924	13.28	1965	35.36	2006	314.75
1884	13.00	1925	14.30	1966	36.00	2007	328.00
1885	10.80	1926	14.05	1967	38.10	2008	319.16
1886	11.10	1927	13.05	1968	41.17	2009	241.38
1887	13.80	1928	14.81	1969	47.43	2010	348.34
1888	16.80	1929	18.35	1970	58.07		
1889	13.50	1930	13.23	1971	52.09		
1890	15.60	1931	8.37	1972	51.44		

Notes:

1850–96, New York price for Lake copper (99.9-percent-pure copper), *in* Loughlin, G.F., Prefatory note on the report on gold, silver, copper, lead, and zinc, Mineral Resources of the United States 1922, Part I, U.S. Geological Survey, 1925, p. 127a.

1897–98, New York price for Lake copper (99.9-percent-pure copper), *in* Engineering and Mining Journal.

1899–1908, Electrolytic (99.9-percent-pure copper) refinery price in New York, *in* Engineering and Mining Journal.

1909–22, Electrolytic (99.9-percent-pure copper) domestic f.o.b. refinery, *in* American Metal Market.

1923–72, Electrolytic (99.9-percent-pure copper) domestic delivered to Connecticut price, *in* American Metal Market.

1973–77, U.S. producer electrolytic (99.9-percent-pure copper) wirebar, *in* Metals Week.

1978–92, U.S. producer cathode (99.99-percent-pure copper), *in* Metals Week.

1993–2010, U.S. producer cathode (99.99-percent-pure copper), *in* Platts (Platt's) Metals Week.

84 Metal Prices in the United States Through 2010

Table 1. Annual average lead price.

[Values in dollars per pound]

Year	Price	Year	Price	Year	Price	Year	Price
1909	0.043	1935	0.041	1961	0.109	1987	0.359
1910	0.044	1936	0.047	1962	0.096	1988	0.371
1911	0.044	1937	0.060	1963	0.111	1989	0.394
1912	0.045	1938	0.047	1964	0.136	1990	0.460
1913	0.044	1939	0.051	1965	0.160	1991	0.335
1914	0.039	1940	0.052	1966	0.151	1992	0.351
1915	0.047	1941	0.058	1967	0.140	1993	0.317
1916	0.069	1942	0.065	1968	0.132	1994	0.372
1917	0.088	1943	0.065	1969	0.149	1995	0.423
1918	0.074	1944	0.065	1970	0.157	1996	0.488
1919	0.058	1945	0.065	1971	0.139	1997	0.465
1920	0.080	1946	0.081	1972	0.150	1998	0.453
1921	0.045	1947	0.147	1973	0.163	1999	0.437
1922	0.057	1948	0.180	1974	0.225	2000	0.436
1923	0.073	1949	0.154	1975	0.215	2001	0.436
1924	0.081	1950	0.133	1976	0.231	2002	0.436
1925	0.090	1951	0.175	1977	0.307	2003	0.438
1926	0.084	1952	0.165	1978	0.337	2004	0.551
1927	0.068	1953	0.135	1979	0.526	2005	0.61
1928	0.063	1954	0.141	1980	0.425	2006	0.774
1929	0.068	1955	0.151	1981	0.365	2007	1.240
1930	0.055	1956	0.160	1982	0.255	2008	1.200
1931	0.042	1957	0.147	1983	0.217	2009	0.869
1932	0.032	1958	0.121	1984	0.256	2010	1.090
1933	0.039	1959	0.122	1985	0.191		
1934	0.039	1960	0.119	1986	0.221		

Notes:

1909–36, Primary producer price, New York (common lead, 99.94-percent pure), *in* Engineering and Mining Journal.

1937–66, Primary producer price, New York (common lead, 99.94-percent pure), *in* Engineering and Mining Journal, Metal and Mineral Markets.

1967–70, Primary producer price, New York (common lead, 99.94-percent pure), *in* Metals Week.

1971–85, Primary producer price, delivered (minimum 99.97-percent pure), *in* Metals Week.

1986–93, North American producer price, delivered (minimum 99.97-percent pure), *in* Metals Week.

1994–2010, North American producer price, delivered (minimum 99.97-percent pure), *in* Platts (Platt's) Metals Week.

Significant events affecting U.S. gold prices since 1970

1971	President suspended convertibility of dollar into gold; dollar devalued by 7.9 percent
1972	Official U.S. gold price increased to \$38 per troy ounce
1973	Official U.S. gold price increased to \$42.22 per troy ounce, dollar devalued, two-tier gold price terminated, Organization of Petroleum Exporting Countries (OPEC) oil embargo begins
1974	U.S. citizens allowed to hold gold bullion and coins for the first time in 40 years
1975	U.S. Treasury began public sales of gold stocks
1976	International Monetary Fund (IMF) began 5-year gold sales program; IMF auctions and lower inflation outlook drove gold prices down
1977	Hiatus in U.S. Treasury gold sales
1978	U.S. Treasury resumed selling gold; Middle Eastern investors increased gold purchases
1979	Soviet Union invaded Afghanistan; political upheaval in Iran; taking of U.S. hostages
1980	Gold price peaked at an historic daily high of \$850 per troy ounce on January 21; IMF completes 5-year gold sales program
1982–88	Fluctuating world currency exchange rates, increasing concern about U.S. trade and budget deficits and banking problems, and Third World debt
1989–91	Conflict in the Persian Gulf and the breakup of the Soviet Union; erosion of gold's role as a safe haven for investors; generally weak economic growth worldwide
1992–96	Gold price remained relatively stable
1997–2001	Central banks of several countries sold large shares of gold holdings to meet common-currency criteria for European Union or to demonetize; bank failures or insolvencies in East and Southeast Asian countries
2001	September 11 terrorist attacks
2002–10	Prices surged because of increase in investment in gold stemming from political and economic concerns

Table 1. Annual average gold price.

[Values in dollars per troy ounce]

Year	Price	Year	Price	Year	Price	Year	Price
1968	40.06	1979	307.50	1990	384.93	2001	272.22
1969	41.51	1980	612.56	1991	363.29	2002	311.33
1970	36.41	1981	459.64	1992	344.97	2003	364.80
1971	41.25	1982	375.91	1993	360.91	2004	410.52
1972	58.60	1983	424.00	1994	385.41	2005	446.20
1973	97.81	1984	360.66	1995	385.50	2006	605.83
1974	159.74	1985	317.66	1996	389.08	2007	698.95
1975	161.49	1986	368.24	1997	332.38	2008	873.50
1976	125.32	1987	477.95	1998	295.24	2009	974.68
1977	148.31	1988	438.31	1999	279.91	2010	1,227.51
1978	193.55	1989	382.58	2000	280.10		

Notes:1968–93, Englehard domestic market price, 99.95-percent-pure gold, *in* Metals Week.1994–2010, Englehard domestic market price, 99.95-percent-pure gold, *in* Platts (Platt's) Metals Week.

Significant events affecting silver prices since 1970

1979–80	Individual investors attempted to corner the silver market
1985	U.S. Mint authorized to begin minting a silver bullion coin
1982–97	U.S. Government disposed of silver in the National Defense Stockpile, using it for production of commemorative coins
1998	Price increased in the first quarter of 1998 following disclosure that an investment firm had accumulated approximately 4,000 metric tons (t) of silver
2006	Highest average price since 1983 owing to investment interest in newly established silver exchange-traded fund (ETF)
1999–2010	Price increased mainly because of investment demand and increased industrial use

Table 1. Annual average silver price.

[Values in dollars per troy ounce]

Year	Price	Year	Price	Year	Price	Year	Price
1900	0.62	1928	0.58	1956	0.91	1984	8.14
1901	0.60	1929	0.53	1957	0.91	1985	6.14
1902	0.53	1930	0.38	1958	0.89	1986	5.47
1903	0.54	1931	0.29	1959	0.91	1987	7.01
1904	0.58	1932	0.28	1960	0.91	1988	6.53
1905	0.61	1933	0.35	1961	0.92	1989	5.50
1906	0.67	1934	0.48	1962	1.09	1990	4.82
1907	0.66	1935	0.64	1963	1.28	1991	4.04
1908	0.53	1936	0.45	1964	1.29	1992	3.94
1909	0.52	1937	0.45	1965	1.29	1993	4.30
1910	0.54	1938	0.43	1966	1.29	1994	5.29
1911	0.54	1939	0.39	1967	1.55	1995	5.15
1912	0.62	1940	0.35	1968	2.14	1996	5.19
1913	0.61	1941	0.35	1969	1.79	1997	4.89
1914	0.56	1942	0.38	1970	1.77	1998	5.54
1915	0.51	1943	0.45	1971	1.55	1999	5.25
1916	0.67	1944	0.45	1972	1.68	2000	5.00
1917	0.84	1945	0.52	1973	2.56	2001	4.39
1918	0.98	1946	0.80	1974	4.71	2002	4.62
1919	1.12	1947	0.72	1975	4.42	2003	4.91
1920	1.02	1948	0.74	1976	4.35	2004	6.69
1921	0.63	1949	0.72	1977	4.62	2005	7.34
1922	0.68	1950	0.74	1978	5.40	2006	11.57
1923	0.65	1951	0.89	1979	11.09	2007	13.41
1924	0.67	1952	0.85	1980	20.63	2008	15.00
1925	0.69	1953	0.85	1981	10.52	2009	14.69
1926	0.62	1954	0.85	1982	7.95	2010	20.20
1927	0.57	1955	0.89	1983	11.44		

Notes:

1900–74, New York price of 99.9-percent-pure silver, *in* Silver, U.S. Bureau of Mines Minerals Yearbook 1974.1974–93, New York price of 99.9-percent-pure silver, *in* Metals Week.1993–2010, New York price of 99.9-percent-pure silver, *in* Platts (Platt's) Metals Week.

Table 1. Annual average zinc price.

[Values in dollars per pound]

Year	Price	Year	Price	Year	Price	Year	Price
1875	0.070	1909	0.054	1943	0.083	1977	0.344
1876	0.072	1910	0.054	1944	0.083	1978	0.310
1877	0.060	1911	0.056	1945	0.083	1979	0.373
1878	0.049	1912	0.068	1946	0.087	1980	0.374
1879	0.052	1913	0.055	1947	0.105	1981	0.446
1880	0.055	1914	0.051	1948	0.136	1982	0.385
1881	0.052	1915	0.142	1949	0.122	1983	0.414
1882	0.053	1916	0.136	1950	0.139	1984	0.486
1883	0.045	1917	0.089	1951	0.180	1985	0.404
1884	0.044	1918	0.080	1952	0.162	1986	0.380
1885	0.043	1919	0.070	1953	0.109	1987	0.419
1886	0.044	1920	0.078	1954	0.107	1988	0.602
1887	0.046	1921	0.047	1955	0.123	1989	0.820
1888	0.049	1922	0.057	1956	0.135	1990	0.746
1889	0.050	1923	0.066	1957	0.114	1991	0.528
1890	0.055	1924	0.063	1958	0.103	1992	0.584
1891	0.050	1925	0.076	1959	0.115	1993	0.462
1892	0.046	1926	0.073	1960	0.130	1994	0.493
1893	0.040	1927	0.062	1961	0.116	1995	0.534
1894	0.035	1928	0.060	1962	0.116	1996	0.511
1895	0.036	1929	0.065	1963	0.120	1997	0.646
1896	0.039	1930	0.046	1964	0.136	1998	0.514
1897	0.041	1931	0.036	1965	0.145	1999	0.535
1898	0.046	1932	0.029	1966	0.145	2000	0.556
1899	0.058	1933	0.040	1967	0.139	2001	0.440
1900	0.044	1934	0.042	1968	0.135	2002	0.386
1901	0.041	1935	0.043	1969	0.147	2003	0.406
1902	0.048	1936	0.049	1970	0.153	2004	0.525
1903	0.054	1937	0.065	1971	0.161	2005	0.671
1904	0.051	1938	0.046	1972	0.178	2006	1.589
1905	0.059	1939	0.051	1973	0.207	2007	1.544
1906	0.061	1940	0.063	1974	0.360	2008	0.889
1907	0.058	1941	0.075	1975	0.390	2009	0.779
1908	0.046	1942	0.083	1976	0.370	2010	1.020

Notes:

1875–1904, New York price for Prime Western zinc (98-percent-pure), *in* Ingalls, W.R., *Lead and Zinc in the United States*, McGraw-Hill, N.Y., 1980, p. 342.1905–70, St. Louis/East St. Louis producer price for Prime Western zinc, *in* American Metal Market/Metal Statistics.1971–79, U.S. Dealers Prime Western delivered price, *in* Metals Week.1980–93, U.S. Dealers High Grade zinc (99.9-percent-pure) delivered price, *in* Metals Week.1994–98, U.S. Dealers Special High Grade zinc (99.99-percent-pure) delivered price, *in* Platt's Metals Week.1999–2010, North American Special High Grade zinc (99.995-percent-pure) delivered price, *in* Platt's Metals Week.



October 20, 2014

U.S. Environmental Protection Agency
Office of Water, Water Permits Division
Mail Code 4203M, ATTN: MSGP Reports
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

RE: Annual Reporting Form – Hecla Limited Inactive and Unstaffed Site - Tamarack

To Whom It May Concern:

Please find enclosed the Annual Reporting Form for Hecla Limited's inactive and unstaffed site Tamarack.

If there are any omissions, errors, or concerns related to this submittal please do not hesitate to contact Judy Cloos, using any of the following:

Attn: Judy Cloos
Hecla Limited
Lucky Friday Mine
P.O. Box 31
Mullan, ID 83846
208-744-1751 X 2241
jcloos@hecla-mining.com

Thank you.

Best Regards,

A handwritten signature in black ink, appearing to read "PG", is written over a horizontal line.

Paul Glader
Environmental Director

Cc: File
Judy Cloos
Encls.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

Annual Reporting Form

A. GENERAL INFORMATION

1. Facility Name: HECLA LIMITED TAMARACK

2. NPDES Permit Tracking No.: IDR05C444

3. Facility Physical Address:

a. Street: BURKE ROAD/NINEMILE ROAD

b. City: WALLACE

c. State: ID d. Zip Code: 83873

4. Lead Inspectors Name: JUDY CLOOS

Title: SR ENVIRONMENTAL TECH

Additional Inspectors Name(s): KENNETH CLOOS

SEASONAL EMPLOYEE

5. Contact Person: JUDY CLOOS

Title: SR ENVIRONMENTAL TECH

Phone: 208 - 744 - 1751 Ext. 2241 E-mail: jcloos@hecla-mining.com

6. Inspection Date: 06 / 12 / 2014

B. GENERAL INSPECTION FINDINGS

1. As part of this comprehensive site inspection, did you inspect all potential pollutant sources, including areas where industrial activity may be exposed to stormwater?

☒ YES ☐ NO

If NO, describe why not:

NOTE: Complete Section C of this form for each industrial activity area inspected and included in your SWPPP or as newly identified in B.2 or B.3 below where pollutants may be exposed to stormwater.

2. Did this inspection identify any stormwater or non-stormwater outfalls not previously identified in your SWPPP? ☐ YES ☒ NO

If YES, for each location, describe the sources of those stormwater and non-stormwater discharges and any associated control measures in place:

3. Did this inspection identify any sources of stormwater or non-stormwater discharges not previously identified in your SWPPP? ☐ YES ☒ NO

If YES, describe these sources of stormwater or non-stormwater pollutants expected to be present in these discharges, and any control measures in place:

4. Did you review stormwater monitoring data as part of this inspection to identify potential pollutant hot spots? ☐ YES ☐ NO ☒ NA, no monitoring performed

If YES, summarize the findings of that review and describe any additional inspection activities resulting from this review:

5. Describe any evidence of pollutants entering the drainage system or discharging to surface waters, and the condition of and around outfalls, including flow dissipation measures to prevent scouring:

There are no industrial materials or activities exposed to storm water at the Tamarack and associated sites. Based on past site visits, there are no indications of significant storm water runoff from these sites into the East Fork of Ninemile Creek, Canyon Creek and associated tributaries.

6. Have you taken or do you plan to take any corrective actions, as specified in Part 3 of the permit, since your last annual report submission (or since you received authorization to discharge under this permit if this is your first annual report), including any corrective actions identified as a result of this annual comprehensive site inspection?

☐ YES ☒ NO

If YES, how many conditions requiring review for correction action as specified in Parts 3.1 and 3.2 were addressed by these corrective actions?

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NOTE: Complete the attached Corrective Action Form (Section D) for each condition identified, including any conditions identified as a result of this comprehensive stormwater inspection.

C. INDUSTRIAL ACTIVITY AREA SPECIFIC FINDINGS

Complete one block for each industrial activity area where pollutants may be exposed to stormwater. Copy this page for additional industrial activity areas.

In reviewing each area, you should consider:

- Industrial materials, residue, or trash that may have or could come into contact with stormwater;
- Leaks or spills from industrial equipment, drums, tanks, and other containers;
- Offsite tracking of industrial or waste materials from areas of no exposure to exposed areas; and
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas.

INDUSTRIAL ACTIVITY AREA 1:

1. Brief Description:

Tamarack mine and associated sites.

2. Are any control measures in need of maintenance or repair? ☐ YES ☒ NO

3. Have any control measures failed and require replacement? ☐ YES ☒ NO

4. Are any additional/revised control measures necessary in this area? ☐ YES ☒ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised c necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO

3. Have any control measures failed and require replacement? ☐ YES ☐ NO

4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

NOTE: Copy this page and attach additional pages as necessary

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO3. Have any control measures failed and require replacement? ☐ YES ☐ NO4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO3. Have any control measures failed and require replacement? ☐ YES ☐ NO4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

INDUSTRIAL ACTIVITY AREA _____:

1. Brief Description:

2. Are any control measures in need of maintenance or repair? ☐ YES ☐ NO3. Have any control measures failed and require replacement? ☐ YES ☐ NO4. Are any additional/revised BMPs necessary in this area? ☐ YES ☐ NO

If YES to any of these three questions, provide a description of the problem: (Any necessary corrective actions should be described on the attached Corrective Action Form)

D. CORRECTIVE ACTIONS

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in this comprehensive stormwater inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # of for this reporting period.

2. Is this corrective action:

- ☐ An update on a corrective action from a previous annual report; or
☐ A new corrective action?

3. Identify the condition(s) triggering the need for this review:

- ☐ Unauthorized release or discharge
☐ Numeric effluent limitation exceedance
☐ Control measures inadequate to meet applicable water quality standards
☐ Control measures inadequate to meet non-numeric effluent limitations
☐ Control measures not properly operated or maintained
☐ Change in facility operations necessitated change in control measures
☐ Average benchmark value exceedance
☐ Other (describe): _____

4. Briefly describe the nature of the problem identified:

5. Date problem identified: / /

6. How problem was identified:

- ☐ Comprehensive site inspection
☐ Quarterly visual assessment
☐ Routine facility inspection
☐ Benchmark monitoring
☐ Notification by EPA or State or local authorities
☐ Other (describe): _____

7. Description of corrective action(s) taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analyses to be conducted, etc.) or if no modifications are needed, basis for that determination:

8. Did/will this corrective action require modification of your SWPPP? ☐ YES ☐ NO

9. Date corrective action initiated: / /

10. Date correction action completed: / / or expected to be completed: / /

11. If corrective action not yet completed, provide the status of corrective action at the time of the comprehensive site inspection and describe any remaining steps (including timeframes associated with each step) necessary to complete corrective action:

E. ANNUAL REPORT CERTIFICATION**1. Compliance Certification**

Do you certify that your annual inspection has met the requirements of Part 4.2 of the permit, and that, based upon the results of this inspection, to the best of your knowledge, you are in compliance with the permit? ☒ YES ☐ NO

If NO, summarize why you are not in compliance with the permit:

2. Annual Report Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Authorized Representative
Printed Name:

PAUL GLADER

Title: ENV DIRECTOR

Signature: 

Date Signed: 10/20/14

Comprehensive Site Inspection 2014

Comprehensive Site Inspection Procedures.

Annual comprehensive site inspections will occur during coverage under this permit. Annual means once during each of the following inspection periods beginning with the period authorized to discharge under this permit:

Year 1:	September 29, 2008 – September 29, 2009
Year 2:	September 29, 2009 – September 29, 2010
Year 3:	September 29, 2010 – September 29, 2011
Year 4:	September 29, 2011 – September 29, 2012
Year 5:	September 29, 2012 – September 29, 2013

For “Year 1”, a comprehensive site inspection for an inspection period is waived if authorization to discharge is less than three months before the end of that inspection period.

Should coverage be administratively continued after the expiration date of MSGP 2008, inspections will continue to be performed annually until coverage under MSGP 2008 is no longer necessary.

Comprehensive site inspections will be conducted by qualified personnel with at least one member of the stormwater pollution prevention team participating in the comprehensive site inspections.

Comprehensive site inspections must cover all areas of the facility affected by the requirements in this permit, including the areas identified in the SWPPP as potential pollutant sources (see Part 5.1.3) where industrial materials or activities are exposed to stormwater, any areas where control measures are used to comply with the effluent limits in Part 2, and areas where spills and leaks have occurred in the past 3 years. The inspections must also include a review of monitoring data collected in accordance with Part 6.2. Inspectors must consider the results of the past year’s visual and analytical monitoring when planning and conducting inspections. Inspectors must examine the following:

- Industrial materials, residue, or trash that may have or could come into contact with stormwater;

Were all site areas examined? Y / N

- Leaks or spills from industrial equipment, drums, tanks, and other containers;

Were all site areas examined? Y / N

- Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;

Were all site areas examined? Y / N

- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas;

Were all site areas examined? Y / N

- Control measures needing replacement, maintenance, or repair.

Were all site areas examined? Y / N

Describe any control measures needing replacement, maintenance, or repair:

No replacement or maintenance needed for control measures.

Stormwater control measures required by this permit must be observed to ensure that they are functioning correctly. If discharge locations are inaccessible, nearby downstream locations must be inspected.

Were all control measures observed? Y / N

Are all stormwater control measures functioning correctly? Y / N

If the answer above is "No", describe the specific site and situation:

Comprehensive Site Inspection Documentation

Document the findings of each comprehensive site inspection and maintain this documentation onsite with the SWPPP as required in Part 5.4. In addition, submit this documentation in an annual report as required in Part 7.2. At a minimum, documentation of the comprehensive site inspection must include (see the Annual Reporting Form included as Appendix I):

The date(s) of the inspection; 5/27/2014 – 6/25/2014

The name(s) and title(s) of the personnel making the inspection;

Judy Cloos – Senior Environmental Technician
(name and title)

Ken Cloos – Seasonal Employee
(name and title)

Dustin Howell – Seasonal Employee
(name and title)

Findings from the examination of areas of your facility affected by the requirements of MSGP 2008:

All observations relating to the implementation of your control measures including:

previously unidentified discharges from the site? Y / N

previously unidentified pollutants in existing discharges? Y / N

evidence of, or the potential for, pollutants entering the drainage system? Y / N

evidence of pollutants discharging to receiving waters at all facility outfall(s), and the condition of and around the outfall, including flow dissipation measures to prevent scouring? Y / N, and

additional control measures needed to address any conditions requiring corrective action identified during the inspection? Y / N

For any items answered “Yes” above, describe the specific site location and circumstances below:

Any required revisions to the SWPPP resulting from the inspection? Y / N

If “Yes”, describe:

Any corrective action required as a result of the comprehensive site inspection must be performed consistent with Part 3 of this permit.

Do you certify that this annual comprehensive site inspection met the requirements of MSGP 2008 Part 4.3 and that based upon the results of this inspection, to the best of your knowledge, you are in compliance with 2008? Yes X No

If "No", summarize why you are not in compliance with the permit:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Paul Glader – Environmental Director

(name & title – printed)

(signature)

(date)

STORM WATER POLLUTION PREVENTION PLAN

STAR- MORNING FACILITY -- MSGP 2008 PERMIT #IDR05A401

Contents of Your SWPPP (Part 5.1)

For coverage under this permit, your SWPPP must contain all of the following elements:

- Stormwater pollution prevention team (see Part 5.1.1);
- Site description (see Part 5.1.2);
- Summary of potential pollutant sources (see Part 5.1.3);
- Description of control measures (see Part 5.1.4);
- Schedules and procedures (see Part 5.1.5);
- Documentation to support eligibility considerations under other federal laws (see Part 5.1.6); and
- Signature requirements (see Part 5.1.7).

Where your SWPPP refers to procedures in other facility documents, such as a Spill Prevention, Control and Countermeasure (SPCC) Plan or an Environmental Management System (EMS) developed for a National Environmental Performance Track facility, copies of the relevant portions of those documents must be kept with our SWPPP.

Stormwater Pollution Prevention Team (Part 5.1.1)

“You must identify the staff members (by name or title) that comprise the facility’s stormwater pollution prevention team as well as their individual responsibilities. Your stormwater pollution prevention team is responsible for assisting the facility manager in developing and revising the facility’s SWPPP as well as maintaining control measures and taking corrective actions where required. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of the applicable portions of this permit and your SWPPP.”

The pollution prevention team includes Judy Cloos, Ken Cloos and Dustin Howell, who will manage all SWPPP issues.

Site Description (Part 5.1.2)

- **Activities at the Facility**

Provide a description of the nature of the industrial activities at your facility.

8. G.6.1 Nature of Industrial Activities

Briefly document in your SWPPP the mining and associated activities that can potentially affect the stormwater discharges covered by this permit, including a general description of the location of the site relative to major transportation routes and communities.

The Star Morning Facility includes historic disturbances associated with underground mining and surface milling facilities. The Hecla Mine operated from the late 1800's until the late 1940's. The Star facility was operated initially under a contract arrangement beginning in the 1920's; the Morning facilities were historically operated by Federal/ASARCO and subsequently leased, then purchased, by Hecla in the 1960's. Hecla ceased mining and milling activities at this site in 1982. The property was leased to Star/Phoenix Mining Company in 1989. Star/Phoenix ceased operation in November 1990. The Star Mine area of the Facility was active and staffed from June 2011 to June 2013 during underground exploration activities. The underground exploration activities ended in June 2013 and this Facility will no longer be routinely staffed.

Development rock associated with the underground exploration activities was trucked to Star Pond 5, a historically disturbed area (closed per the requirements of the Idaho Department of Water Resources (IDWR) rules for Mine Tailings Impound Structures (MTIS) that had been used during historic Star operations for storage of tailings. The development rock was placed over an approximately one acre area on the closed pond surface.

Work also took place at the Grouse 700 portal to establish a secondary escapeway for the underground exploration project. The Grouse 700 portal is located at an elevation of 5,130 (see Figure 4). There are no buildings at this location. The site provided access to the underground workings for repair and rehabilitation work only and is now closed.

This Facility area is part of Operable Unit 3 of the Bunker Hill Mining and Metallurgical Complex superfund site, specifically addressed by the Consent Decree (CD) for Operable Unit 3.

The nearest community to the Star side of the facility is the small community of Burke. The nearest community to the Morning side of the facility is the town of Mullan. Mullan sits adjacent to Interstate 90 and Burke is located north of Interstate 90 on the Burke Canyon road (old State Highway 4). (See attached general location map)

- General location map

Provide a general location map (e.g. U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of your facility and all receiving waters for your stormwater discharges.

See attached general location map (Figure 1), and both the Star Mine 2000 Portal Site Map (Figure 2), Star Pond 5 Site Map (Figure 3), and Grouse 700 Portal (Figure 4).

- Site map

Provide a map showing:

>the size of the property in acres;

The Star Mine area is approximately 4 surface acres, as indicated on the site maps. The mining area itself is fairly expansive, including numerous historic shafts, adits, and exploration developments. The acreage is assumed to be the surface area disturbance related to past mining activities. Surface land ownership overlaying the underground mining operations is predominantly owned by other entities, primarily timber companies. The disturbed acreage including the access roads was determined during the inspections of these properties under the MSGP and is as follows: Hecla #1-1.5, Hecla #2-1.5, Hecla tramway-1.4, Marsh-2.38, O'Neill Rock dump-2.54, tailing ponds-58.35, Omaha-1.0, Burke mine/mill site-9.37, Russell #1-#2- 0.22, Duluth-0.2, Joe Matt-0.68, Midway Summit-0.32, Hecla 700 level-0.34, Hecla 1000 level-0.3, Hecla 1200 level-6.75, Morning #1-0.2, Morning #2-1.5, Morning #3-1.31, Morning #4-0.99, Morning #5-4.55, Grouse Claims-0.1, You Like- 1.12, We Like-0.53, Fanny Gremm-1.3, Iron Crown-0.2, Star Discovery Cut-0.3, Lucretia- 0.1. The total acreage is 99.05 acres.

>the location and extent of significant structures and impervious surfaces;

Impervious areas represent nearly half the site area, as indicated on Figures 2 & 3.

>directions of stormwater flows (use arrows);

See attached site maps. Flow arrows will be refined as necessary as stormwater runoff is observed.

>locations of all existing structural control measures;

Water diversions, including a liner and riprap, have been constructed at the Star 1200 level. The development rock at this location has been terraced and BMPs have been placed along the toe of this area. Some seeding has also occurred. Improvements have been made to the access road to the Star 700 level including culverts and re-grading. The Morning #1 and #4 have logging roads running through the dumps. Morning #5 area has a new logging road above the portal and the logging company agreed to culvert the water through the dump and riprap Mill Creek near the road. Natural vegetation also provides a vegetative filter at some locations.

>locations of all receiving waters in the immediate vicinity of your facility, indicating if any of the waters are impaired and, if so, whether the waters have TMDLs established for them;

The receiving water bodies of storm water runoff from the Star-Morning facility sites include: O'Neill Gulch Creek, Canyon Creek, Grouse Gulch Creek, & Mill Creek. (See topographic map attached.)

Canyon Creek (from and including Gorge Gulch to mouth) is "impaired" by sediment and has an EPA-approved sediment TMDL. Canyon Creek is also "impaired" for metals (dissolved lead, dissolved zinc, and dissolved cadmium). EPA has approved a TMDL but DEQ needs to finalize via APA process. Do to the uncertainty; monitoring will occur as if there is no EPA-approved TMDL, although this may not be necessary. The Record of Decision (ROD) for Operable Unit 3 may serve as the functional equivalent of a TMDL as virtually all remediation is driven by water quality.

Canyon Creek is completely enclosed within a concrete structure for approximately 1,300 feet, beginning near the entrance to the Star Mine 2000 Portal Area site and continuing approximately 200 feet past the east limit of this area (see attached site map). Surface runoff from this area cannot reach Canyon Creek where the creek is completely enclosed. Surface runoff from the Star Pond 5 area is contained and infiltrated in a grassy swale and does not flow overland into Canyon Creek. Surface runoff from the Grouse 700 Portal area is controlled with berms, sediment traps, and straw wattles.

>locations of all stormwater conveyances including ditches, pipes, and swales;

See attached site maps.

>locations of potential pollutant sources identified under Part 5.1.3.2;

It is not evident that significant amounts of pollutants originate from the Star-Morning facility due to the inactive status. Potential sources of turbidity and sediment include access roads and development rock storage areas. These sources are not expected to be significant.

>locations where significant spills or leaks identified under Part 5.1.3.3 have occurred;

No major spills or leaks are known to have occurred.

>locations of all stormwater monitoring points;

See attached site maps.

>locations of stormwater inlets and outfalls, with a unique identification code for each outfall (e.g. Outfall No. 1, No. 2, etc.), indicating if you are treating one or more outfalls as “substantially identical” under Parts 4.2.3, 5.1.5.2, and 6.1.1, and an approximate outline of the areas draining to each outfall;

See attached site maps.

>municipal separate storm sewer systems, where your stormwater discharges to them;

n/a

>locations and descriptions of all non-stormwater discharges identified under Part 2.1.2.10;

Mine groundwater from the Star Mine side of the Facility is routed to the historic Star tailings line, which transports the groundwater to the Star Pond 6, a tailings pond located down gradient of the site (See Figure 1, NPDES Permit No.ID-000016-7). Mine groundwater from the Morning side of the Facility is routed to the SFCDR. Other historic waters in the area have been identified during the superfund RI/FS activities and are to be addressed under superfund according to the CD.

locations of the following activities where such activities are exposed to precipitation:

>>fueling stations;

n/a

>>vehicle and equipment maintenance and/or cleaning areas;

n/a

>>loading/unloading areas;

n/a

>>locations used for the treatment, storage, or disposal of wastes;

previously addressed

>>liquid storage tanks;

n/a

>>processing and storage areas;

n/a

>>immediate access roads and rail lines used or traveled by carriers of raw materials/manufactured products/waste material/by-products used or created by the facility;

n/a

>>transfer areas for substances in bulk; and

n/a

>>machinery

n/a

>locations and sources of run-on to your site from adjacent property that contains significant quantities of pollutants.

n/a

8.G.6.2 Site Map

Document in your SWPPP the locations of the following (as appropriate):

mining or milling site boundaries;

See attached site maps.

access and haul roads;

Access roads are present at the sites and are controlled by the state, county, logging companies or federal agencies. See attached topographic map for access road locations. No haul roads are associated with this operation.

outline of the drainage areas of each stormwater outfall within the facility with indications of the types of discharges from the drainage areas;

See attached site maps.

location(s) of all permitted discharges covered under an individual NPDES permit;

See attached general location map.

outdoor equipment storage, fueling, and maintenance areas;

Maintenance and fueling has not occurred since 2013. Maintenance activities, during operation, occurred indoors in the plant buildings or at underground maintenance stations.

materials handling areas;

n/a

outdoor manufacturing, outdoor storage, and material disposal areas;

Outdoor manufacturing does not occur at the Star-Morning site. The other items were addressed above.

outdoor chemicals and explosives storage areas;

n/a

overburden, materials, soils, or waste storage areas;

Development rock areas at numerous locations, tailing impoundment area, and the mine/mill plant yard where historic storage of mining and milling items occurred are shown on the attached topographic map.

location of mine drainage (where water leaves mine) or other process water;

“Mine drainage” is a regulatory term applicable to active facilities. There are no process wastewater sources at the Star-Morning sites.

tailings piles and ponds (including proposed ones);

There is one permitted MTIS (Star Pond 6) at the Star-Morning facility.

heap leach pads;

n/a

off-site points of discharge for mine drainage and process water;

n/a

surface waters;

The receiving water bodies of storm water runoff from the Star-Morning facility sites include: O’Neill Gulch Creek, Canyon Creek, Grouse Gulch Creek, & Mill Creek. (See topographic map attached.)

boundary of tributary areas that are subject to effluent limitation guidelines;

See attached maps.

and location(s) of reclaimed areas

n/a – future area remediations conducted under the ROD for Operable Unit 3 will dictate remediation areas.

Summary of Potential Pollutant Sources (Part 5.1.3)

You must document areas at your facility where industrial materials or activities are exposed to stormwater and from which allowable non-stormwater discharges are released. *Industrial materials or activities* include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products. *Material handling activities* include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For each area identified, the description must include:

- **Activities in the area (5.1.3.1).**

A list of the industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).

none

- **Pollutants (5.1.3.2).**

A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity. The pollutant list must include all significant materials that have been handled, treated, stored, or disposed, and that have been exposed to stormwater in the 3 years prior to the date you prepare or amend your SWPPP.

Potential pollutant constituents in stormwater discharges from the exposed materials could include common heavy metals (lead, zinc, iron, copper, and cadmium), sediment, TSS, and turbidity.

Spills and Leaks (5.1.3.3).

You must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s) that would be affected by such spills and leaks. You must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the 3 years prior to the date you prepare or

amend your SWPPP.

There were no spills or leaks in the prior three years

Note: Significant spills and leaks include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA Sections 311 (see 40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC §9602. This permit does not relieve you of the reporting requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 relating to spills or other releases of oils or hazardous substances.

- Non-Stormwater Discharges (5.1.3.4).

You must document that you have evaluated for the presence of non-stormwater discharges and that all unauthorized discharges have been eliminated.

Documentation of your evaluation must include:

The date of any evaluation;

These areas have been evaluated by EPA during the superfund activities of Operable Unit 3. Such discharges will be addressed under superfund according to the CD.

A description of the evaluation criteria used;

Visual evaluations and monitoring (associated with the superfund activities).

A list of the outfalls or onsite drainage points that were directly observed during the evaluation;

- Areas on the attached maps are visited at least annually.

The different types of non-stormwater discharge(s) and source locations; and

Groundwater from historic mine openings - maps are available in the superfund documents for Operable Unit 3.

The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an

unauthorized cooling water discharge.

The CD with EPA will address these discharges.

- 8.G.6.6 Certification of Permit Coverage for Commingled Non-Stormwater Discharges.

If you are able, consistent with Part 8.G.5.3 above, to certify that a particular discharge composed of commingled stormwater and non-stormwater is covered under a separate NPDES permit, and that permit subjects the non-stormwater portion to effluent limitations prior to any commingling, retain such certification with your SWPPP. This certification must identify the non-stormwater discharges, the applicable NPDES permit(s), the effluent limitations placed on the non-stormwater discharge by the permit(s), and the points at which the limitations are applied.

n/a

- Salt Storage (5.1.3.5). You must document the location of any storage piles containing salt used for deicing or other commercial or industrial purposes.

n/a

- Sampling Data (5.1.3.6). You must summarize all stormwater discharge sampling data collected at your facility during the previous permit term.

n/a

8.G.6.3 Potential Pollutant Sources.

For each area of the mine or mill site where stormwater discharges associated with industrial activities occur, identify the types of pollutants (e.g. heavy metals, sediment) likely to be present in significant amounts. Consider these factors:

the mineralogy of the ore and waste rock (e.g. acid forming);

Mine sites in the area are situated in the Belt Series rocks, which contain similar minerals. Rock formations contain only very small amounts of pyrite or other acid forming minerals. As a result the mineral compounds, if present in the outfall(s), tend to result in slightly basic water. Canyon Creek has not been shown to have a pH problem even though impacted by historic mining/milling practices. Potential pollutant sources include the development rock areas and disturbed areas at the

immediate historic mine and mill site. Based on past site inspections, there are no indications of significant storm water runoff from the sites other than the Star 1200 level where water diversion and repair work has occurred in the past. The types of pollutants with the potential to be present would be TSS, lead, zinc, cadmium, copper, and mercury as identified for the Ore Mining and Dressing point source category at 40 CRF 440, Subpart J – Copper, Lead, Gold, Silver, and Molybdenum Ores Subcategory, although only lead, zinc, and cadmium have been shown to be potential concerns during the lengthy and detailed RI/FS superfund process.

toxicity and quantity of chemicals used, produced, or discharged;

n/a

the likelihood of contact with stormwater;

Based on the applicable portions of the narrative above, pollutants are not expected to be present in significant amounts.

vegetation of site (if any);

Some of the sites contain substantial natural vegetation.

and history of significant leaks or spills of toxic or hazardous pollutants.

There have not been any such leaks or spills as addressed above.

Also include a summary of any existing ore or waste rock or overburden characterization data and test results for potential generation of acid rock. If any new data is acquired due to changes in the ore type being mined, update your SWPPP with this information.

For the above requirements of section 8.G.6.3, based upon the lack of erosion and results of past evaluations, the site is very stable and does not appear to be a source of significant pollutants. Mine sites in the area are situated in the Belt Series rocks, which contain similar minerals. Rock formations contain only very small amounts of pyrite or other acid forming minerals. As a result, the mineral compounds if present in the outfalls tend to result in slightly basic water. Potential pollutant sources include; 1) the development rock area, and 2) historic areas at the combined mine/mill site as discussed above. Numerous superfund documents developed for Operable Unit 3 contain characterization data and pH has not been identified as a concern.

Description of Control Measures (Part 5.1.4).

- **Control Measures to Meet Technology-Based and Water Quality-Based Effluent Limits (5.1.4.1).**

You must document the location and type of control measures you have installed and implemented at your site to achieve the non-numeric effluent limits in Part 2.1.2, and where applicable in Part 8, the effluent limitations guidelines-based limits in Part 2.1.3, the water quality-based effluent limits in Part 2.2, and any agreed-upon endangered species or NEPA-related requirements in Parts 2.3 and 2.4, and describe how you addressed the control measure selection and design considerations in part 2.1.1. This documentation must describe how the control measures at your site address both the pollutant sources identified in Part 5.1.3, and any stormwater run-on that commingles with any discharges covered under this permit.

Due to the nature of the site areas, limited BMPs are necessary. BMP locations are shown on the site maps. Ultimately, the ROD implementation process will dictate activities at the sites.

Part 2.1.2 Non-Numeric Technology-Based Effluent Limits (BPT/BAT/BCT).

2.1.2.1 Minimize Exposure. You must minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff by either locating these industrial materials and activities inside or protecting them with storm resistant coverings (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, you should pay particular attention to the following:

>use grading, berming, or curbing to prevent runoff of contaminated flows and divert run-on away from these areas;

>locate materials, equipment, and activities so that leaks are contained in existing containment and diversion systems (confine the storage of leaky or leak-prone vehicles and equipment awaiting maintenance to protected areas);

>clean up spills and leaks promptly using dry methods (e.g., absorbents) to prevent the discharge of pollutants;

>use drip pans and absorbents under or around leaky vehicles and equipment or store indoors where feasible;

- >use spill/overflow protection equipment;
- >drain fluids from equipment and vehicles prior to on-site storage or disposal;
- >perform all cleaning operations indoor, under cover, or in bermed areas that prevent runoff and run-on and also that capture any overspray; and
- >ensure that all washwater drains to a proper collection system (i.e., not the stormwater drainage system).

The discharge of vehicle and equipment washwater, including tank cleaning operations, is not authorized by this permit. These wastewaters must be covered under a separate NPDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or disposed of otherwise in accordance with applicable law.

Note: Industrial materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged to receiving or if discharges are authorized under another NPDES permit.

Limited industrial activities occurred and development rock is the exposed material as indicated above and shown on the site maps.

2.1.2.2 Good Housekeeping. You must keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and storing materials in appropriate containers.

Good housekeeping will be observed at the site.

2.1.2.3 Maintenance. You must regularly inspect, test, maintain, and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharged to receiving waters. You must maintain all control measures that are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If you find that your control measures need to be replaced or repaired, you must make the necessary repairs or modifications as expeditiously as practicable.

Maintenance is not an issue for industrial equipment and systems due to the inactive nature of the site. BMPs are inspected at least annually and repaired as necessary.

2.1.2.4 Spill Prevention and Response Procedures. You must minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, you must implement:

>Procedures for plainly labeling containers (e.g., “Used Oil”, “Spent Solvents”, “Fertilizers and Pesticides”, etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;

>Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;

>Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of your stormwater pollution prevention team (see Part 5.1.1); and

>Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. Where a leak, spill or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302, occurs during a 24-hour period, you must notify the National Response Center (NEC) at (800) 424-8802 or, in the Washington, DC, metropolitan area, call (202) 267-2675 in accordance with the requirements of 40 CFR Part 110, 40 CFR part 117, and 40 CFR Part 302 as soon as you have knowledge of the discharge. State or local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available.

Spill prevention and response procedures are not necessary due to the absence of industrial materials as noted above.

2.1.2.5 Erosion and Sediment Controls. You must stabilize exposed areas and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. Among other actions you must take to meet this limit, you must place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to consult with EPA’s internet-based resources relating to BMPs for erosion and sedimentation, including the sector-specific *Industrial Stormwater Fact Sheet*

Series, (www.epa.gov/npdes/stormwater/msgp), *National Menu of Stormwater BMPs* (www.epa.gov/npdes/stormwater/menuofbmps), and *National Management Measures to Control Nonpoint Source Pollution from Urban Areas* (www.epa.gov/owow/nps/urbanmm/index.html), and any similar State or Tribal publications.

As indicated above, the limited historic disturbances associated with the Star-Morning Facility are very stable after many decades of exposure. The MANUAL OF BEST MANAGEMENT PRACTICES FOR THE MINING INDUSTRY IN IDAHO (BMP manual) will be consulted for appropriate control measures as necessary. The BMP manual was developed by the Idaho Mining Advisory Committee comprised of: Idaho Department of Lands, Idaho Department of Water Resources, Idaho Department of Health & Welfare (DEQ), Idaho Department of Fish & Game, Bureau of Land Management, USDA Forest Services (Region 1), USDA Forest Service (Region 4), Idaho Conservation League, Clark Fork Coalition, Idaho Mining Association, Independent Miner's Association, and individual volunteers. Additional procedures required by the CD will be followed under that specific procedure.

2.1.2.6 Management of Runoff. You must divert, infiltrate, reuse, contain, or otherwise reduce stormwater runoff, to minimize pollutants in your discharges. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to consult with EPA's internet-based resources relating to runoff management, including the sector-specific *Industrial Stormwater Fact Sheet Series*, (www.epa.gov/npdes/stormwater/msgp), *National Menu of Stormwater BMPs* (www.epa.gov/npdes/stormwater/menuofbmps), and *National Management Measures to Control Nonpoint Source Pollution from Urban Areas* (www.epa.gov/owow/nps/urbanmm/index.html), and any similar State or Tribal publications.

As indicate above, the stability of the historic disturbances limits the need for many control features. Stormwater infiltration occurs at the sites and runoff will be controlled with appropriate BMPs. At the Star 1200 level (see attached maps), a small intermittent drainage was diverted over the development rock.

2.1.2.7 Salt Storage Piles Containing Salt. You must enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. You must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if stormwater runoff from the piles is not discharged or if discharges from the piles are authorized under another NPDES permit.

n/a

2.1.2.8 Sector Specific Non-Numeric Effluent Limits. You must achieve any additional non-numeric limits stipulated in the relevant sector-specific section(s) of Part 8.

Addressed below.

2.1.2.9 Employee Training. You must train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution Prevention Team. Training must cover both the specific control measures used to achieve the effluent limits in this Part, and monitoring, inspection, planning, reporting, and documentation requirements in other parts of this permit. EPA recommends training be conducted at least annually (or more often if employee turnover is high).

Training amongst the team member and site personnel will occur annually, with documentation included with the SWPPP.

2.1.2.10 Non-Stormwater Discharges. You must eliminate non-stormwater discharges not authorized by an NPDES permit. See Part 1.2.3 [THERE IS NO PART 1.2.3 – THE LIST IS AT PART 1.1.3] for a list of non-stormwater discharges authorized by this permit.

See above discussion on the superfund process.

2.1.2.11 Waste, Garbage and Floatable Debris. You must ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

Such materials are not generated at this inactive and unstaffed site.

2.1.2.12 Dust Generation and Vehicle Tracking of Industrial Materials. You must minimize generation of dust and off-site tracking of raw, final, or waste materials.

These activities are not occurring at this inactive and unstaffed site.

8. G.6.4 Documentation of Control Measures.

Document all control measures that you implement consistent with Part 8.G.5.2. If control measures are implemented or planned but are not listed in Part 8.G.5.2 (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in your SWPPP.

Berms, straw logs/bales, stormwater runoff directed to infiltration, sediment sump at bridge and silt fences are all in place at the Star Mine Site. Water diversions, including a liner and riprap, have been constructed at the Star 1200 level. The development rock at this location has been terraced and BMPs have been placed along the toe of this area. Some seeding has also occurred. Improvements have been made to the access road to the Star 700 level including culverts and re-grading. The Morning #1 and #4 have logging roads running through the dumps. Morning #5 area has a new logging road above the portal and the logging company agreed to culvert the water through the dump and riprap Mill Creek near the road. Natural vegetation also provides a vegetative filter at some locations.

8.G.5 Additional Technology-Based Effluent Limits.

8.G.5. 1 *Employee Training.* (See also Part 2.1.2.9) Conduct employee training at least annually at active and temporarily inactive sites.

See above discussion per training.

8.G.5.2 *Stormwater Controls.* Apart from the control measures you implement to meet your Part 2 effluent limits, consider implementing the following control measures at your site. The potential pollutants identified in Part 8.G.6.3 shall determine the priority and appropriateness of the control measures selected.

8.G.5 .2.1 *Stormwater Diversions:* Consider diverting stormwater away from potential pollutant sources. Following are some options: interceptor or diversion controls (e.g., dikes, swales, curbs, or berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents.

Water diversions have been implemented at the Star 1200 level as indicated above. Such features may be part of the ultimate ROD implementation addressing the sites.

8.G.5.2.2 *Capping:* When capping is necessary to minimize pollutant discharges in stormwater, identify the source being capped and the material used to construct the cap.

Capping is not necessary at these sites or has already been completed.

8.G.5.2.3 *Treatment*: If treatment of stormwater (e.g., chemical or physical systems, oil and water separators, artificial wetlands) is necessary to protect water quality, describe the type and location of treatment used. Passive and/or active treatment of stormwater runoff is encouraged where practicable. Treated runoff may be discharged as a stormwater source regulated under this permit provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Ore Mining and Dressing Point Source Category (40 CFR Part 440).

Treatment of stormwater runoff from these sites has not been shown to be necessary.

Schedules and Procedures (Part 5.1.5)

- Pertaining to Control Measures Used to Comply with the Effluent Limits in Part 2. (5.1.5.1)

The following must be documented in your SWPPP:

Good Housekeeping (See Part 2.1.2.2) – A schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers;

N/A at this site due to inactive and unstaffed nature of the site.

Maintenance (See Part 2.1.2.3) – Preventative maintenance procedures, including regular inspections, testing, maintenance, and repair of all industrial equipment and systems, and control measures, to avoid situations that may result in leaks, spills, and other releases, and any back-up practices in place should a runoff event occur while a control measure is off-line;

N/A at this site due to inactive and unstaffed nature of the site.

Spill Prevention and Response Procedures (See Part 2.1.2.4) – Procedures for preventing and responding to spills and leaks. You may reference the existence of other plans for

Spill Control and Countermeasure (SPCC) developed for the facility under Section 311 of the CWA or BMP programs otherwise required by an NPDES permit for the facility, provided that you keep a copy of that other plan onsite and make it available for review consistent with Part 5.3; and

N/A at this site due to inactive and unstaffed nature of the site.

Employee Training (Part 2.1.2.9) – A schedule for all types of necessary training.

8. G.6.5 Employee Training. All employee training(s) must be documented in the SWPPP.

See above per training. Documentation will be attached to the SWPPP.

Pertaining to Monitoring and Inspection (5.1.5.2).

You must document in your SWPPP your procedures for conducting the five types of analytical monitoring specified by this permit, where applicable to your facility, including:

>Benchmark monitoring (see Part 6.2.1);

N/A at this site due to inactive and unstaffed nature of the site.

>Effluent limitations guidelines monitoring (see Part 6.2.2);

n/a at this site due to inactive and unstaffed nature of the site.

>State- or Tribal-specific monitoring (see Part 6.2.3)

n/a at this site due to inactive and unstaffed nature of the site.

>Impaired waters monitoring (see Part 6.2.4); and

Monitoring will begin per the process identified at MSGP 6.2.4.2. The metals TMDL (dissolved lead, dissolved zinc, dissolved cadmium), applicable to some site receiving waters, was approved by EPA 8/18/2000, according to DEQ's approved Integrated Report. This TMDL must be subjected to the Idaho APA process. The sediment TMDL is also applicable to some site receiving waters. Due to similarities of the sites (development rock exposure) and potential pollutants (heavy metals, TSS, and turbidity),

any identified outfalls are considered to be substantially identical, not only within the Star-Morning facility sites, but other historic inactive sites in the areas addressed under the Superfund RI/FS process. Sampling documentation will be maintained and kept with the SWPPP.

>Other monitoring as required by EPA (see Part 6.2.5).

N/A at this site due to inactive and unstaffed nature of the site.

For each type of monitoring, your SWPPP must document:

>Locations where samples are collected, including any determinations that two or more outfalls are substantially identical;

Part 6.1.1 Monitored Outfalls. Applicable monitoring requirements apply to each outfall authorized by this permit, except as otherwise exempt from monitoring as a “substantially identical outfall.” If your facility has two or more outfalls that you believe discharge substantially identical effluents, based on the similarities of the general industrial activities and control measures, exposed materials that may significantly contribute pollutants to stormwater, and runoff coefficients of their drainage areas, you may monitor the effluent of just one of the outfalls and report that the results also apply to the substantially identical outfall(s). As required in Part 5.1.5.2, your SWPPP must identify each outfall authorized by this permit and describe the rationale for any substantially identical outfall determinations. The allowance for monitoring only one of the substantially identical outfalls is not applicable to any outfalls with numeric effluent limitations. You are required to monitor each outfall covered by a numeric effluent limit as identified in Part 6.2.2. [THE “METAL MINING” SECTOR HAS NO NUMERIC EFFLUENT LIMITS]

Storm Water Pollution Prevention Plan (SWPPP) components will address site information knowledge available at this time. For example, the MSGP requires information in the SWPPP, such as outfall locations, which have not all been located at the Star-Morning facility due to the remote and historic nature of these inactive mine sites. The monitoring waiver for inactive and unstaffed sites will be applied where applicable. Outfalls are considered to be substantially identical.

>Parameters for sampling and the frequency of sampling for each parameter;

Potential parameters for impaired waters monitoring include lead, zinc, and cadmium, even though EPA approved the TMDL but DEQ has not formalized (i.e. not clear if this

sampling is required). Frequency will be determined made pursuant to MSGP 6.2.4.2.

>Schedules for monitoring at your facility, including schedule for alternate monitoring periods for climates with irregular stormwater runoff (see Part 6.1.6):

See above response. Sample will be collected when an opportunity is available per site staffing/logistics.

>Any numeric control values (benchmarks, effluent limitations guidelines, TMDL-related requirements, or other requirements) applicable to discharges from each outfall; and

To be determined per 6.2.4.2.

>Procedures (e.g., responsible staff, logistics, laboratory to be used, etc.) for gathering storm event data, as specified in Part 6.1.

The pollution prevention team members would conduct the sampling. For any potential TSS monitoring, analysis will be conducted by a team member pursuant to 40 CFR Part 136 on the same day as sample collection. For potential dissolved metal analysis of lead, zinc, and cadmium; SVL Analytical, Inc. of Kellogg, Idaho would be used. Samples would be delivered to SVL the same day as sample collection occurs. Local area rain gauges could be used to determine rainfall for storm events.

If you are invoking the exception for inactive and unstaffed sites for benchmark monitoring, you must include in your SWPPP the information to support this claim as required by Part 6.2.1.3.

Documentation is attached.

You must document the following in your SWPPP if you plan to use the substantially identical outfall exception for your quarterly visual assessment requirements in Part 4.2 or your benchmark monitoring requirements in Part 6.2.1:

>Location of each of the substantially identical outfalls;

See attached site maps.

>Description of the general industrial activities conducted in the drainage area of each outfall;

As described above, there are no industrial activities occurring. Historic sampling during

superfund-related activities shows the lowest concentrations instream during spring runoff. Loadings are higher, but this appears to be attributable to historic tailings in the floodplain because similar increases are seen in stream reaches (which contain historic tailings) where development rock and mining disturbances are absent.

>Description of the control measures implemented in the drainage area of each outfall;

See attached site maps for control measures. The primary potential outfall area for Star site is the access road leading up to the 2000 Portal site.

See attached maps for control measures. Most sites have stabilized naturally and do not exhibit signs of any significant erosion. Estimated drainage areas:

Hecla #1-#2 ~10, 000 sq. ft.	Russell #1-#2 ~32, 500 sq. ft.
Marsh ~25, 000 sq. ft.	O'Neill rock dump ~50, 000 sq. ft.
Burke mine/mill site ~50, 000 sq. ft.	Duluth ~100, 000 sq. ft.
Joe Matt ~30, 000 sq. ft.	Omaha ~30, 000 sq. ft.
Midway Summit ~50, 000 sq. ft.	Hecla tramway ~20, 000 sq. ft.
Tailing ponds ~113, 750 sq. ft.	Grouse claims ~1, 250 sq. ft.
You Like ~25, 000 sq. ft.	We Like ~10, 000 sq. ft.
Fanny Gremm ~200, 000 sq. ft.	Morning #1-#5 ~200, 000 sq. ft.
Iron Crown ~10, 000 sq. ft.	Star Discovery Cut ~10, 000 sq. ft.
Star 700 ~200, 000 sq. ft.	Star 1000 ~100, 000 sq. ft.
Star 1200 ~900, 000 sq. ft.	Lucretia ~100, 000 sq. ft.

>Description of the exposed materials located in the drainage area of each outfall that are likely to be significant contributors of pollutants to stormwater discharges;

No exposed materials are considered to be significant sources of pollutants as evidenced by annual inspection results showing quite stable natural conditions. Development rock is present at all sites.

>An estimate of the runoff coefficient of the drainage areas (low = under 40%; medium = 40 to 65%; high = above 65%); and

Due to the permeable nature of development rock, and observed historic stability, runoff coefficients are considered to be low for these areas. The majority of the Star Mine area is pavement & concrete with outslope areas consisting of native materials with no evidence of significant erosion. BMPs have been installed and maintained.

>Why the outfalls are expected to discharge substantially identical effluents.

District mining occurs in similar rock structures (Belt Series) with the potential pollutants being TSS, metals, and turbidity. Specific to metals, the numerous water quality studies conducted during basin superfund activities have identified dissolved zinc, dissolved cadmium, and particulate lead as water quality concerns throughout Operable Unit 3, including the areas surrounding the Facility.

You must document in your SWPPP your procedures for performing, as appropriate, the three types of inspections specified by this permit, including:

>Routine facility inspections (see Part 4.1);

N/A – inactive and unstaffed waiver applied.

>Quarterly visual assessment of stormwater discharges (see Part 4.2): and

N/A – inactive and unstaffed waiver applied.

>Comprehensive site inspections (see Part 4.3).

Site areas described above will be inspected annually with documentation maintained in the SWPPP.

For each type of inspection performed, your SWPPP must identify:

>Person(s) or positions of person(s) responsible for inspection;

The pollution prevention team member will conduct the inspections.

>Schedules for conducting inspections, including tentative schedule for facilities in climates with irregular stormwater runoff discharges (see Part 4.2.3): and

Annual comprehensive inspections will occur when sites are accessible, which can be late May/early June thru October.

>Specific items to be covered by the inspections, including the schedules for specific outfalls.

All site areas identified above will be inspected during the annual comprehensive site inspection. Inspection forms will be kept with the SWPPP.

If you are invoking the exception for inactive and unstaffed sites relating to routine facility inspections and quarterly visual assessments, you must include in your SWPPP the information to support this claim as required by Parts 4.1.3 and 4.2.3.

This exception is being invoked and supporting information will be included with the SWPPP documents.

Documentation to Support Eligibility Considerations Under Other Federal Laws (Part 5.1.6).

- Documentation Regarding Endangered Species (5.1.6.1).

You must keep with your SWPPP the documentation supporting your determination with regard to Part 1.1.4.5 (Endangered and Threatened Species and Critical Habitat Protection).

Attached

- Documentation Regarding Historic Properties (5.1.6.2).

You must keep with your SWPPP the documentation supporting your determination with regard to Part 1.1.4.6 (Historic Properties Protection).

Attached

- Documentation Regarding NEPA Review (5.1.6.3).

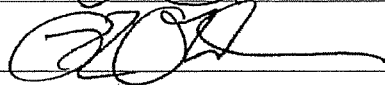
You must keep with your SWPPP the documentation supporting your certification of eligibility under Part 1.1.2.5 (Discharges Subject to Any New Source Performance Standards).

N/A - these are historic sites on private property addressed under superfund. No Table 1-1 conditions apply.

Signature Requirements (Part 5.1.7).

You must sign and date your SWPPP in accordance with Appendix B, Subsection 11, including the date of signature.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Paul Le Glaser Title: Environmental Director
Signature:  Date: 6/12/15

Required SWPPP Modifications (Part 5.2)

You must modify your SWPPP whenever necessary to address any of the triggering conditions for corrective action in Part 3.1 and to ensure that they do not reoccur, or to reflect changes implemented when a review following the triggering conditions in Part 3.2 indicates that changes to your control measures are necessary to meet the effluent limits in this permit. Changes to your SWPPP document must be made in accordance with the corrective action deadlines in Parts 3.3 and 3.4, and must be signed and dated in accordance with Appendix B, Subsection 11.

Required SWPPP modifications will be documented and, where necessary, addressed per the corrective action requirements of Part 3 of MSGP 2008.

SWPPP Availability (Part 5.3).

You must retain a copy of the current SWPPP required by this permit at the facility, and it must be immediately available to EPA; a State, Tribal, or local agency approving stormwater management plans; the operator of an MS4 receiving discharge from the site; and representatives of the U.S. Fish and Wildlife (USFS) or the National Marine Fisheries Service (NMFS) at the

time of an onsite inspection or upon request. EPA may provide access to portions of your SWPPP to a member of the public upon request. Confidential Business Information (CBI) may be withheld from the public, but may not be withheld from those staff cleared for CBI review within EPA, USFWS, or NMFS.

EPA encourages you to post your SWPPP online and provide the website address on your NOI.

Additional Documentation Requirements (Part 5.4)

You are required to keep the following inspection, monitoring, and certification records with your SWPPP that together keep your records complete and up-to-date, and demonstrate your full compliance with the conditions of this permit:

- A copy of the NOI submitted to EPA along with any correspondence exchanged between you and EPA specific to coverage under this permit;
- A copy of the acknowledgement letter you receive from the NOI Processing Center or eNOI system assigning your permit tracking number;
- A copy of this permit (an electronic copy easily available to SWPPP personnel is also acceptable).
- Descriptions and dates of any incidences of significant spills, leaks, or other releases that resulted in discharges of pollutants to waters of the U.S., through stormwater or otherwise; the circumstances leading to the release and actions taken in response to the release; and measures taken to prevent the recurrence of such releases (see Part 2.1.2.4);
- Records of employee training, including date training received (see Part 2.1.2.9);
- Documentation of maintenance and repairs of control measures, including the date(s) of regular maintenance, date(s) of discovery of areas in need of repair/replacement, and for repairs, the date(s) that the control measure(s) returned to full function, and the justification for any extended maintenance/repair schedules (see Part 2.1.2.3);
- All inspection reports, including the Routine Facility Inspection Reports (see Part 4.1), the Quarterly Visual Assessment Reports (see Part 4.2), and the Comprehensive Site Inspection Reports (see Part 4.3);

- Description of any deviations from the schedule for visual assessments and/or monitoring, and the reason for the deviations (e.g., adverse weather or it was impracticable to collect samples within the first 30 minutes of a measureable storm event) (see Parts 4.2.1, 6.1.4, and 6.2.1.2);
- Description of any corrective action taken at your site, including triggering event and dates when problems were discovered and modifications occurred;
- Documentation of any benchmark exceedences and how they were responded to, including either (1) corrective action taken, (2) a finding that the exceedence was due to natural background pollutant levels, or (3) a finding that no further pollutant reductions were technologically available and economically practicable and achievable in light of best industry practice consistent with Part 6.2.1.2;
- Documentation to support any determination that pollutants of concern are not expected to be present above natural background levels if you discharge directly to impaired waters, and that such pollutants were not detected in your discharge or were solely attributable to natural background sources (see Part 6.2.4.2); and
- Documentation to support your claim that your facility has changed its status from active to inactive and unstaffed with respect to the requirements to conduct routine facility inspections (see Part 4.1.3), quarterly visual assessments (see Part 4.2.3), and/or benchmark monitoring (see Part 6.2.1.3).

Applicable documents per the Part 5.4 requirements will be kept with the SWPPP.