Fact Sheet

The U.S. Environmental Protection Agency (EPA)
Proposes to Reissue a National Pollutant Discharge Elimination System (NPDES) Permit to Discharge Pollutants Pursuant to the Provisions of the Clean Water Act (CWA) to:

Independent Meat Company

Public Comment Start Date: September 21, 2015
Public Comment Expiration Date: October 21, 2015

Technical Contact: John Drabek, PE, 206-553-8257, drabek.john@epa.gov
1-800-424-4372 ext. 3-8257 (within Region 10)

The EPA Proposes To Issue an NPDES Permit
The EPA proposes to issue he NPDES permit for the facility referenced above. The draft permit places conditions on the discharge of pollutants from the wastewater treatment plant to waters of the United States. In order to ensure protection of water quality and human health, the permit places limits on the types and amounts of pollutants that can be discharged from the facility.

This Fact Sheet includes:
- information on public comment, public hearing, and appeal procedures
- a listing of proposed effluent limitations and other conditions for the facility
- a map and description of the discharge location
- technical material supporting the conditions in the permit

State Certification
The EPA is requesting that the Idaho Department of Environmental Quality certify the NPDES permit for this facility, under Section 401 of the Clean Water Act. Comments regarding the certification should be directed to:

Regional Administrator
Idaho Department of Environmental Quality
Twin Falls Regional Office
650 Addison Ave W #110
Twin Falls, ID 83301

Public Comment
Persons wishing to comment on, or request a Public Hearing for the draft permit for this facility may do so in writing by the expiration date of the Public Comment period. A request for a Public Hearing must state the nature of the issues to be raised as well as the requester's name, address and telephone number. All comments and requests for Public Hearings must be in writing and should be submitted to the EPA as described in the Public Comments Section of the attached Public Notice.

After the Public Notice expires, and all comments have been considered, the EPA's regional Director for the Office of Water and Watersheds will make a final decision regarding permit issuance. If no substantive comments are received, the tentative conditions in the draft permit will become final, and the permit will become effective upon issuance. If substantive comments are received, the EPA will address the comments and issue the permit. The permit will become effective no less than 30 days after the issuance date, unless an appeal is submitted to the Environmental Appeals Board within 30 days pursuant to 40 CFR 124.19.

Documents are Available for Review
The draft NPDES permit and related documents can be reviewed or obtained by visiting or contacting the EPA's Regional Office in Seattle between 8:30 a.m. and 4:00 p.m., Monday through Friday at the address below. The draft permits, fact sheet, and other information can also be found by visiting the Region 10 NPDES website at "http://EPA.gov/r10earth/waterpermits.htm."

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue, OWW-191
Seattle, Washington 98101
(206) 553-0523 or
Toll Free 1-800-424-4372 (within Alaska, Idaho, Oregon and Washington)

The fact sheet and draft permits are also available at:

EPA Idaho Operations Office
950 W Bannock
Suite 900
Boise, ID 83702
Phone: 208-378-5746

Idaho Department of Environmental Quality
Twin Falls Regional Office
650 Addison Ave W #110
Twin Falls, ID 83301

Acronyms

AML	Average Monthly Limit
AWL	Average Weekly Limit
BAT	Best Available Technology economically achievable
BCT	Best Conventional pollutant control Technology
BMP	Best Management Practices
BPT	Best Practicable
°C	Degrees Celsius
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EFH	Essential Fish Habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FR	Federal Register
gpd	Gallons per day
ICIS	Integrated Compliance Information System
LTA	Long Term Average
mg/L	Milligrams per liter
ml	milliliters
ML	Minimum Level
mgd	Million gallons per day
MDL	Maximum Daily Limit or Method Detection Limit
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
OWW	Office of Water and Watersheds
RP	Reasonable Potential
RPM	Reasonable Potential Multiplier
RWC	Receiving Water Concentration

SIC	Standard Industrial Classification
TSD	Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001)
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
WLA	Wasteload allocation
WQBEL	Water quality-based effluent limit
Water Quality Standards	Water Quality Standards

I. Applicant

A. General Information

This fact sheet provides information on the draft NPDES permit for the following entity:

Independent Meat Co.
NPDES Permit No. ID0000388

Physical Address:
2027 Orchard Drive East
Twin Falls, ID, 83303

Mailing Address:
Independent Meat Co.
P.O. Box EE
Twin Falls, ID 83303

Contact:
Rob Stephens
Environmental Manger
208-733-0980

B. Permit History

The most recent NPDES permit for the Independent Meat Co, was issued on June 2, 1978, became effective on July 3, 1978, and expired on July 3, 1983. The facility is currently operating under an administratively extended permit. An NPDES application for permit issuance was submitted by the permittee on September 29, 2006. The facility submitted a new updated application on February 20, 2009 and it was determined to be complete on February 25, 2009. The facility submitted another updated application on July 14, 2015 and it was determined to be complete on July 15, 2015.

II. Facility Information

A. Description of Facility

Independent Meat Company (IMC) is a year round meat packing and sausages facility producing pork products. IMC process activities include delivery, killing, curing, cutting, packaging, freezing and finished product shipment. IMC applied to the EPA for an NPDES permit to discharge once-through non-contact cooling water. The facility is located in an industrial area on the south side of Twin Falls, Idaho. The facility is situated on a bluff approximately 365 feet from the north bank of Rock Creek and employs approximately 265 individuals. (see Appendix A, Photograph 1). The latest EPA inspection report provides a facility description. IMC has been selling and processing meat since 1904. IMC utilizes a commercial ammonia refrigeration system for cold storage purposes for the meat processing and packaging facility. The system uses shell-and-tube water-cooled condensers (five vertical towers - see Photo 6) to transfer the latent heat from the vaporized refrigerant in the closed-circuit refrigeration system to the cooling water flowing through the condenser. There is no

direct contact between the refrigerant side and the cooling water side of the system (water in the refrigeration system would cause the system to fail).

The cooling water is pumped from a "seep tunnel"-a horizontal tunnel constructed years ago in the native basalt, 20-30 feet below the surface, to provide for drainage of the farmland above. The tunnel mouth is located in the basalt cliffs on the south side of Rock Creek across from IMC. There is a continuous high-volume discharge of water from the tunnel to Rock Creek. As reported by IMC staff, the Idaho Department of Water Resources had issued a permit to IMC to authorize the withdrawal of up to 600 gallons per minute (gpm) of water from the seep tunnel for use in the water-cooled condensers. Cooling water is pumped from the tunnel, through a flow meter, across Rock Creek, to and through the condenser towers located at the rear of the IMC facility (see Appendix A site map Photograph 1). According to IMC staff, the withdrawal of water from the seep tunnel is between 250 and 300 gpm.

Since October, 1976 all process wastewater is discharged to the Twin Falls Publicly Owned Treatment Works (POTW) through the POTW's pretreatment program. Currently 95,000 gallons per day (gpd) of process wastewater and 5,400 gpd of non-process wastewater is discharged to the POTW.

This application is for non-contact cooling water only. Based on the updated application submitted by IMC the maximum daily flow rate of non-contact cooling water is 504,000 gpd and the average daily value over the last year was 450,000 gpd.

The proposed permit will authorize the discharge of once-through non-contact cooling water, with no chemical addition to Rock Creek.

Outfall Description

Non-contact cooling water with a waste heat component is discharged to Rock Creek through Outfall 002 (see Photograph 4, 5 and 7 in Appendix A).

B. Background Information

Effluent Characterization

In order to determine pollutants of concern for further analysis, the EPA evaluated the application form and additional discharge data.

The only pollutant is temperature. Chemicals are not added. Temperature discharges are shown in the following chart based on the discharge monitoring reports. The reported values on the DMR represent maximum daily.

Compliance History

The EPA reviewed the last five years of effluent monitoring data (2009 through 2014 from the discharge monitoring reports (DMR). The temperature limit in the 1978 permit was 80°F. IMC has had no violations. However the inspection of September 18, 2013 found no records of calibration for the flow meter that measures discharges. It also found there is no practical way to calibrate or test the accuracy of the flow meter without shutting down the facility's refrigeration system (unless some type of by pass is installed). IMC stated the flow meter has not been calibrated since installation two to three years ago. The EPA is requiring

flow meters be calibrated at a frequency specified by the manufacturer and requiring the retention of calibration records.

III. Receiving Water

This facility discharges to Rock Creek a tributary to the Snake River.

A. Low Flow Conditions

The Technical Support Document for Water Quality-Based Toxics Control (hereafter referred to as the TSD) (EPA, 1991) and the Washington Surface Water Quality Standards (WQS) recommend the flow conditions for use in calculating water quality-based effluent limits (WQBELs) using steady-state modeling. The TSD and the IDEQ WQS state that WQBELs intended to protect aquatic life uses should be based on the lowest seven-day average flow rate expected to occur once every ten years (7Q10) for chronic criteria.

The 7Q10 low flow conditions were determined from data at USGS station 13092747 ROCK CREEK AB HWY 30/93 XING AT TWIN FALLS ID upstream of the discharge.

B. Receiving Water Quality

The EPA reviews receiving water quality data when assessing the need for and developing water quality based effluent limits. In granting assimilative capacity of the receiving water, the EPA must account for the amount of the pollutant already present in the receiving water. In situations where some of the pollutant is actually present in the upstream waters, an assumption of "zero background" concentration overestimates the available assimilative capacity of the receiving water and could result in limits that are not protective of applicable water quality standards.

In addition to flow monitoring USGS station 13092747 ROCK CREEK AB HWY 30/93 XING AT TWIN FALLS ID also monitored temperature upstream of the discharge. However it some years it was discontinuous where part of the season was not measured. To avoid skewed data temperature was determined with complete years. Those complete years are:

April 7, 1993 through April 6, 1994

April 7, 1994 through April 6, 1995

June 8, 2013 through June 7, 2014

June 8, 2014 through June 7, 2015

The 95th percentile receiving water temperature is 20.0°C.

C. Water Quality Standards

Overview

Section 301(b)(1)(C) of the Clean Water Act (CWA) requires the development of limitations in permits necessary to meet water quality standards. Federal regulations at 40 CFR 122.4(d) require that the conditions in NPDES permits ensure compliance with the water quality standards of all affected States. A State's water quality standards are composed of use classifications, numeric and/or narrative water quality criteria and an anti-degradation policy.

The use classification system designates the beneficial uses that each water body is expected to achieve, such as drinking water supply, contact recreation, and aquatic life. The numeric and narrative water quality criteria are the criteria deemed necessary by the State to support the beneficial use classification of each water body. The anti-degradation policy represents a three-tiered approach to maintain and protect various levels of water quality and uses.

Designated Beneficial Uses

This facility discharges to Rock Creek at approximately River Mile 11.2 in the Upper Snake River Basin (HUC 17040212) Subbasin Rock Creek river mile 25 to mouth Water Body Unit US-13. At the point of discharge, the Snake River is protected for the following designated uses (IDAPA 58.01.02.150.14):

- cold water aquatic life
- secondary contact recreation
- salmonid spawning The salmonids in Rock Creek are Brown Trout, Native Trout and Rainbow Trout. Bull Trout does not exist in Rock Creek (e-mail from Balthasar Buhidar, Ph.D. July 21, 2015, citing input from the Idaho Department of Fish and Game.)

In addition, the Idaho Water Quality Standards state that all waters of the State of Idaho are protected for industrial and agricultural water supply (Section 100.03.b and c.), wildlife habitats (100.04) and aesthetics (100.05).

Surface Water Quality Criteria

The criteria are found in the following sections of the Idaho Water Quality Standards:

- The narrative criteria applicable to all surface waters of the State are found at IDAPA 58.01.02.200 (General Surface Water Quality Criteria).
- The numeric criteria for toxic substances for the protection of aquatic life and primary contact recreation are found at IDAPA 58.01.02.210 (Numeric Criteria for Toxic Substances for Waters Designated for Aquatic Life, Recreation, or Domestic Water Supply Use).
- Additional numeric criteria necessary for the protection of aquatic life can be found at IDAPA 58.01.02.250 (Surface Water Quality Criteria for Aquatic Life Use Designations).
- Numeric criteria necessary for the protection of recreation uses can be found at IDAPA 58.01.02.251 (Surface Water Quality Criteria for Recreation Use Designations).
- Water quality criteria for agricultural water supply can be found in the EPA's *Water Quality Criteria 1972*, also referred to as the "Blue Book" (EPA R3-73-033) (See IDAPA 58.01.02.252.02)

The numeric and narrative water quality criteria applicable to Rock Creek at the point of discharge are provided below.

- Temperature: Water temperatures of 22°C instantaneous or less with a maximum

daily average of no greater than 19°C.

- Temperature during salmonid spawning period April, September and October: Water temperatures of thirteen (13) degrees C or less with a maximum daily average no greater than nine (9) degrees C.
- floating, suspended, or submerged matter of any kind in concentrations causing nuisance or objectionable conditions or that may impair designated beneficial uses,

Antidegradation

The IDEQ has completed an antidegradation review which is included in the draft 401 certification for this permit. See Appendix D for the State's draft 401 water quality certification. The EPA has reviewed this antidegradation review and finds that it is consistent with the State's 401 certification requirements and the State's antidegradation implementation procedures. Comments on the 401 certification including the antidegradation review should be submitted to the IDEQ as set forth above.

IV. Effluent Limitations

A. Basis for Effluent Limitations

In general, the CWA requires that the effluent limits for a particular pollutant be the more stringent of either technology-based limits or water quality-based limits. Technology-based limits are set according to the level of treatment that is achievable using available technology. A water quality-based effluent limit is designed to ensure that the water quality standards applicable to a waterbody are being met and may be more stringent than technology-based effluent limits. The basis for the effluent limits proposed in the draft permit is provided in Appendix D.

B. Proposed Effluent Limitations

The following summarizes the proposed effluent limits that are in the draft permit.

Narrative Limitations to Implement Washington's Narrative Criteria for Floating, Suspended or Submerged Matter

Section I.B of the permit establishes the following discharge prohibitions.

- The addition of chemicals to cooling water prior to discharge is prohibited.
- The discharge shall not contain floating solids, visible foam, or oily wastes that produce a sheen on the surface of the receiving stream

- ***Numeric Limitations***

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Table 1: Proposed Effluent Limitations		
Parameter	**Units**	**Effluent Limitation**
		Maximum Daily
Temperature	°C	27[1] (80°F)
Temperature May 1 –August 31	°C	19[2]
Temperature November 1 – March 31	°C	19[2]
Temperature April 1- April 30	°C	9[2]
Temperature September 1 – October 31	°C	9[2]

[1]Interim limit lasting one year from the effective date of the permit
[2]Limit to be achieved within one year of the effective date of the permit

C. Compliance Schedules

Compliance schedules are authorized by federal NPDES regulations at 40 CFR 122.47 and Washington WQS WAC 173-201A-510(4). Compliance schedules allow a discharger to phase in, over time, compliance with water quality-based effluent limitations when limitations are in the permit for the first time. Additionally, the federal regulations at 40 CFR 122.47 require that the compliance schedules require compliance with effluent limitations as soon as possible and that, when the compliance schedule is longer than 1 year, the schedule shall set forth interim requirements and the dates for their achievement. The time between the interim dates shall generally not exceed 1 year, and when the time necessary to complete any interim requirement is more than one year, the schedule shall require reports on progress toward completion of these interim requirements.

In order to grant a compliance schedule the permitting authority must make a reasonable finding that the discharger cannot immediately comply with the water quality-based effluent limit upon the effective date of the permit and that a compliance schedule is appropriate (see 40 CFR 122.47 (a)). IMC cannot consistently achieve the temperature water quality based effluent limitation. The EPA has found that the permittee needs a compliance schedule for temperature. A one year compliance schedule is provided in the permit.

There is uncertainty in the adequacy of the land application area to reuse all the 450,000 gpd non-contact cooling water during the spring, autumn and summer season. Time is also necessary for budgeting, engineering and construction of piping to the irrigation fields. Therefore, the compliance schedule is timely.

Based on best professional judgment (BPJ) the EPA establishes an interim effluent limitation of 27°C consistent with the existing permit to ensure no increases in temperature discharges during the term of the compliance schedule.

V. Monitoring Requirements

A. Basis for Effluent and Surface Water Monitoring

Section 308 of the CWA and federal regulation 40 CFR 122.44(i) require monitoring in permits to determine compliance with effluent limitations. Monitoring may also be required to gather effluent and surface water data to determine if additional effluent limitations are required and/or to monitor effluent impacts on receiving water quality.

The permittee is responsible for conducting the monitoring and for reporting results on DMRs or on the application for renewal, as appropriate, to the EPA.

B. Effluent Monitoring

Monitoring frequencies are based on the nature and effect of the pollutant, as well as a determination of the minimum sampling necessary to adequately monitor the facility's performance. Permittees have the option of taking more frequent samples than are required under the permit. These samples must be used for averaging if they are conducted using the EPA-approved test methods (generally found in 40 CFR 136) or as specified in the permit.

Table 2, presents the proposed effluent monitoring requirements in the draft permit. The sampling location must be after the last treatment unit and prior to discharge to the receiving water. The samples must be representative of the volume and nature of the monitored discharge. If no discharge occurs during the reporting period, "no discharge" shall be reported on the DMR. The most representative monitoring for temperature is continuous monitoring. The cost is reasonable, the instrumentation and data loggers readily available and is now required for all effluent temperature monitoring in Idaho. Continuous temperature monitoring is required six months after the effective date of the permit to allow for purchase and installation. In the interim weekly grab sampling is required.

Table 2: Effluent Monitoring Requirements

Parameter	Units	Sample Location	Sample Frequency	Sample Type
Flow	gpd	Effluent	Continuous	recording
Temperature[1]	°C	Effluent	Continuous	recording

[1]Continuous monitoring shall begin within six months of the permit effective date.

C. Electronic Submission of Discharge Monitoring Reports

The draft permit includes new provisions to allow the permittee the option to submit DMR data electronically using NetDMR. NetDMR is a national web-based tool that allows DMR data to be submitted electronically via a secure Internet application. NetDMR allows participants to discontinue mailing in paper forms under 40 CFR § 122.41 and § 403.12. The permittee may use NetDMR after requesting and receiving permission from the EPA Region 10.

Under NetDMR, all reports required under the permit are submitted to the EPA as an electronic attachment to the DMR. Once a permittee begins submitting reports using NetDMR, it is no longer required to submit paper copies of DMRs or other reports to the EPA.

The EPA encourages permittees to sign up for NetDMR, and currently conducts free training on the use of NetDMR. Further information about NetDMR, including upcoming trainings and contacts, is provided on the following website: http://www.EPA.gov/netdmr.

The draft permit requires that the permittee submit DMR data electronically using NetDMR within six months of the effective date of the permit. NetDMR is a national web-based tool that allows DMR data to be submitted electronically via a secure Internet application. NetDMR allows participants to discontinue mailing in paper forms under 40 CFR 122.41 and 403.12. Under NetDMR, all reports required under the permit are submitted to the EPA as an electronic attachment to the DMR. Once a permittee begins submitting reports using

NetDMR, it is no longer required to submit paper copies of DMRs or other reports to the EPA.

The EPA currently conducts free training on the use of NetDMR. Further information about NetDMR, including upcoming trainings and contacts, is provided on the following website: http://www.epa.gov/netdmr. The permittee may use NetDMR after requesting and receiving permission from EPA Region 10.

VI. Other Permit Conditions

A. Quality Assurance Plan

In order to ensure compliance with the federal regulation at 40 CFR 122.41(e) for proper operation and maintenance, the draft permit requires the permittee to develop procedures to ensure that the monitoring data submitted is accurate and to explain data anomalies if they occur. The Navy is required to update the Quality Assurance Plan within 180 days of the effective date of the final permit. The Quality Assurance Plan must include of standard operating procedures the permittee must follow for collecting, handling, storing and shipping samples, laboratory analysis, and data reporting. The plan must be retained on site and be made available to the EPA and Ecology upon request.

B. Environmental Justice

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities." The EPA strives to enhance the ability of overburdened communities to participate fully and meaningfully in the permitting process for the EPA-issued permits, including NPDES permits. "Overburdened" communities can include minority, low-income, tribal, and indigenous populations or communities that potentially experience disproportionate environmental harms and risks. As part of an agency-wide effort, the EPA Region 10 will consider prioritizing enhanced public involvement opportunities for the EPA-issued permits that may involve activities with significant public health or environmental impacts on already overburdened communities. For more information, please visit http://www.epa.gov/compliance/ej/plan-ej/ .

As part of the permit development process, the EPA Region 10 conducted a screening analysis to determine whether this permit action could affect overburdened communities. The EPA used a nationally consistent geospatial tool that contains demographic and environmental data for the United States at the Census block group level. This tool is used to identify permits for which enhanced outreach may be warranted.

The facility is not located within or near a Census block group that is potentially overburdened. The draft permit does not include any additional conditions to address environmental justice.

Regardless of whether a facility is located near a potentially overburdened community, the EPA encourages permittees to review (and to consider adopting, where appropriate) Promising Practices for Permit Applicants Seeking EPA-Issued Permits: Ways To Engage Neighboring Communities (see https://www.federalregister.gov/articles/2013/05/09/2013-

10945/epa-activities-to-promote-environmental-justice-in-the-permit-application-process#p-104). Examples of promising practices include: thinking ahead about community's characteristics and the effects of the permit on the community, engaging the right community leaders, providing progress or status reports, inviting members of the community for tours of the facility, providing informational materials translated into different languages, setting up a hotline for community members to voice concerns or request information, follow up, etc.

C. Standard Permit Provisions

Sections **III, IV and V** of the draft permit contain standard regulatory language that must be included in all NPDES permits. The standard regulatory language covers requirements such as monitoring, recording, and reporting requirements, compliance responsibilities, and other general requirements.

VII. Other Legal Requirements

A. Endangered Species Act

The Endangered Species Act requires federal agencies to consult with National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) and the U.S. Fish and Wildlife Service (USFWS) if their actions could beneficially or adversely affect any threatened or endangered species.

The Endangered Species Act requires federal agencies to consult with National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) and the U.S. Fish and Wildlife Service (USFWS), if their actions could beneficially or adversely affect any threatened or endangered species. In an e-mail dated January 21, 2009, NOAA Fisheries stated that there are no threatened or endangered species under NOAA's jurisdiction in the Snake River drainage upstream of the Hells Canyon Dam, which is located at river mile 247.5. The Rock Creek discharges to the Snake River at approximately river mile 600 upstream from the nearest ESA-listed threatened or endangered species under NOAA's jurisdiction. Therefore, the reissuance of this permit will have no effect on any listed threatened or endangered species under NOAA's jurisdiction.

Based on the USFW website the Bliss Rapids Snail is threatened and the Snake River Physa Snail is endangered in the vicinity of the outfall. According to the Biological Evaluation of the Reissuance of a National Pollutant Discharge Elimination System Permit for the Twin Falls, Idaho, Wastewater Treatment Plant (May, 2009, LimnoTech) (BE) for the EPA the factors of decline are hydroelectric development and operation; increase in concentration of nutrients, sediment and other pollutants reaching the river and competition with nonnative species. In general this part of the Snake River and its tributaries are impacted by runoff from irrigated crop production, rangeland, pastureland, animal holding areas, feedlots, dredging, hydro-modification and urban runoff.

The EPA has determined that issuance of this permit will have no effect on the threatened Bliss Rapids Snail and the endangered Snake River Physa Snail for the following reasons:

- The permit ensures compliance with the approved temperature water quality standards of the State of Idaho.

- Continuous temperature monitoring to ensure compliance and to measure impacts to Rock Creek and to listed species.
- The rapid dispersion of temperature discharges and that temperature effects from point source discharges generally diminish downstream quickly as heat is added and removed from a waterbody through natural equilibrium processes. The effects of temperature are unlike the effects of chemical pollutants, which may remain unaltered in the water column and/or accumulate in sediments and aquatic organisms. (EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards, April 2003).
- Prohibition of any added chemicals

B. Essential Fish Habitat

Essential fish habitat (EFH) is the waters and substrate (sediments, etc.) necessary for fish to spawn, breed, feed, or grow to maturity. The Magnuson-Stevens Fishery Conservation and Management Act (January 21, 1999) requires the EPA to consult with NOAA Fisheries when a proposed discharge has the potential to adversely affect EFH (i.e., reduce quality and/or quantity of EFH).

The EFH regulations define an adverse effect as any impact which reduces quality and/or quantity of EFH and may include direct (e.g. contamination or physical disruption), indirect (e.g. loss of prey, reduction in species' fecundity), site specific, or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. There are no designated critical habitats for the listed Snake River snail species (The Snake River Aquatic Species Recovery Plan. Boise, Idaho, USFWS, 1995). For this reason the Independent Meat discharges will have no effect on EFH.

C. State Certification

Section 401 of the CWA requires the EPA to seek State certification before issuing a final permit. As a result of the certification, the State may require more stringent permit conditions or additional monitoring requirements to ensure that the permit complies with water quality standards, or treatment standards established pursuant to any State law or regulation.

D. Permit Expiration

The permit will expire five years from the effective date.

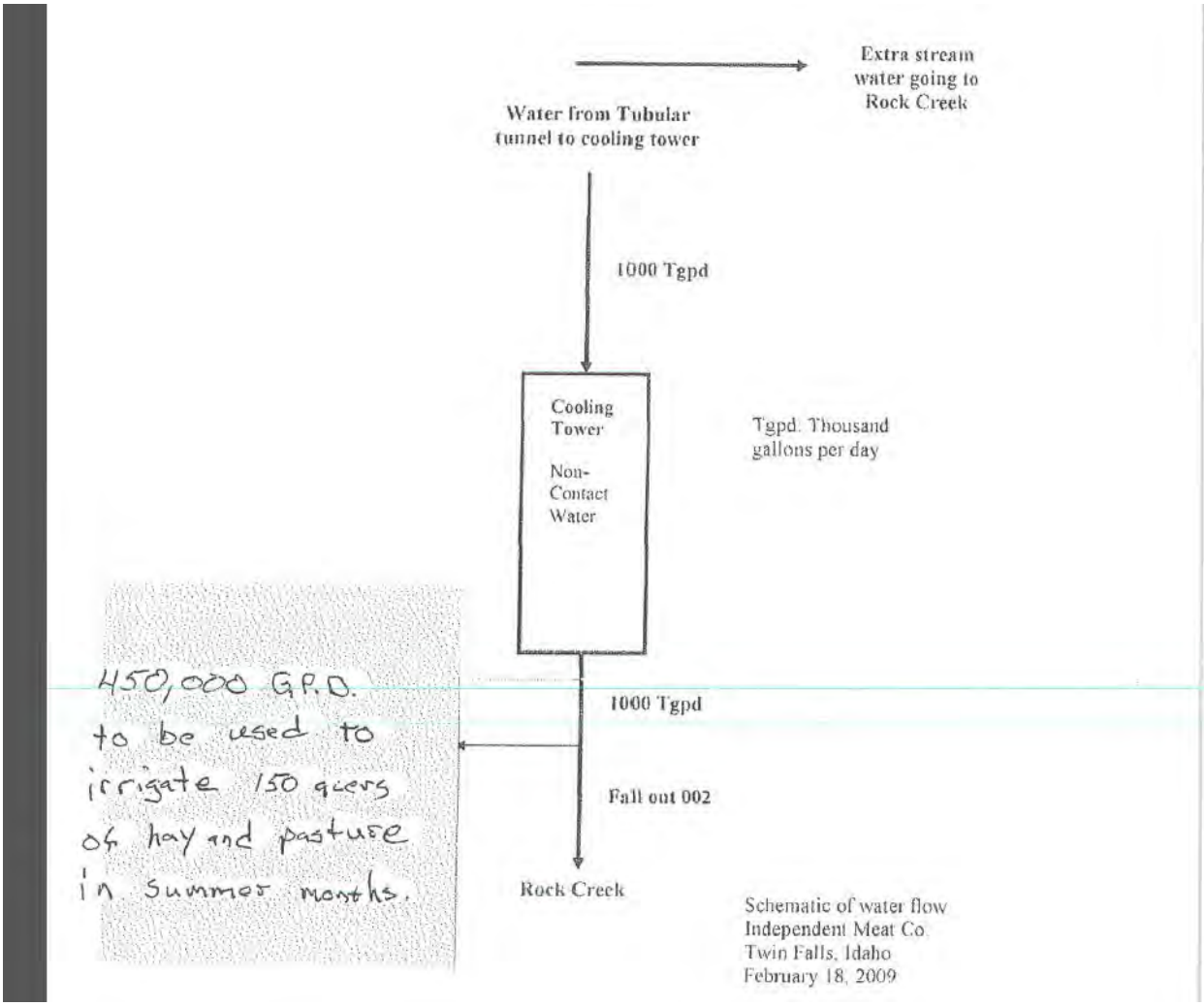
VIII. References

EPA. 1991. *Technical Support Document for Water Quality-based Toxics Control.* US Environmental Protection Agency, Office of Water, EPA/505/2-90-001.

EPA. 2010. *NPDES Permit Writers' Manual.* Environmental Protection Agency, Office of Wastewater Management, EPA-833-K-10-001.

U.S. Environmental Protection Agency, EPA Region 10. *Biological Evaluation of the Reissuance of a National Pollutant Discharge Elimination System Permit for the Twin Falls, Idaho, Wastewater Treatment Plant* (May, 2009, LimnoTech)

Appendix A: Facility Information



Independent Meat Co.; Twin Falls, Idaho
Compliance Evaluation Inspection; September 18, 2013

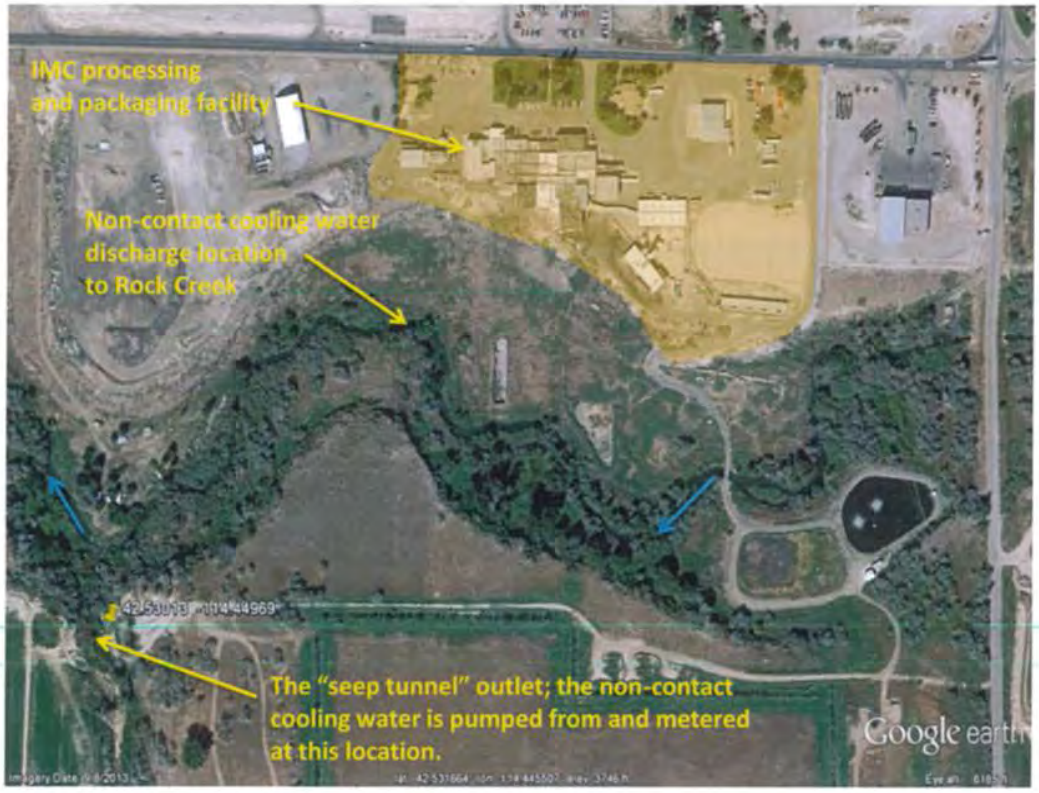


Photo No. 1 – from Google Earth Pro (imagery date 09/08/2013)
An aerial view of the Independent Meat Co (IMC) facility and Rock Creek

Independent Meat Co.; Twin Falls, Idaho
Compliance Evaluation Inspection; September 18, 2013

Photo No. 4 (P1000204)
Facing south from below and behind the IMC facility, the pipe conveying cooling water f
seep tunnel to the intake side of the water-cooled condenser can be observed where it span

Effluent line from the water cooled condenser to discharge location at Rock Creek

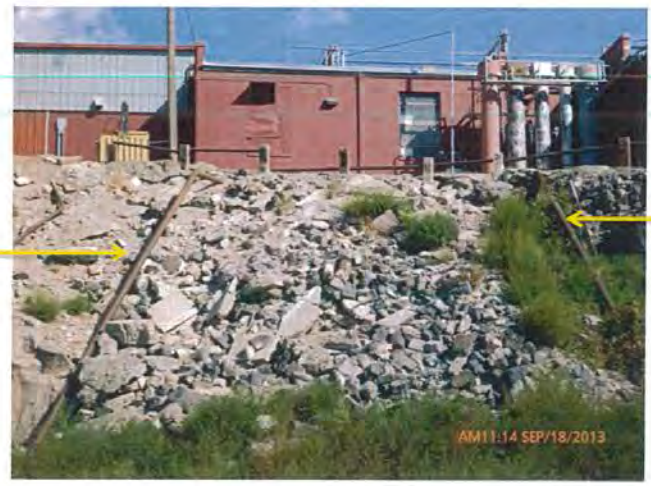


Photo No. 5 (P1000209)
Looking north from the area below the IMC facility, the influent
and effluent lines transporting the non-contact cooling water are clearly visible.

Independent Meat Co.; Twin Falls, Idaho
Compliance Evaluation Inspection; September 18, 2013

Photo No. 6 (P1000203)
Cooling water enters the top of the five-tower water cooled condenser and flows from the cement tank at the bottom.

Photo No. 7 (P1000206)
The non-contact cooling water flowing from the water cooled condenser is discharged to Rock Creek at this location.

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Appendix B: Low Flow Conditions

A. Low Flow Conditions

The low flow conditions of a water body are used to determine water quality-based effluent limits. In general, IDEQ's water quality standards require the temperature criteria be evaluated at the following low flow receiving water conditions as defined below:

Temperature for aquatic life	7-DADMax
The 7Q10 represents lowest average 7 consecutive day flow with an average recurrence frequency of once in 10 years.	

The EPA determined critical low flows upstream of the discharge from the following USGS Station: USGS station 13092747 ROCK CREEK AB HWY 30/93 XING AT TWIN FALLS.

The estimated low flow for the station are presented in Table B-1.

Table B-1: Critical Flow

Flows	cfs
Maximum 7-DADMax	31.8

Appendix C: Basis for Effluent Limits

The following discussion explains the derivation of technology and water quality based effluent limits proposed in the draft permit. Part A discusses technology-based effluent limits, Part B discusses water quality-based effluent limits in general and Part C discusses the effluent limits imposed due to the State's anti-degradation policy.

A. Technology-Based Effluent Limits

Federal Secondary Treatment Effluent Limits

Because Independent Meat does not fit into an industrial category for which the EPA has developed technology-based requirements, the EPA may use best professional judgment (BPJ) to establish technology-based permit requirements, pursuant to authority established by CWA 301(b)(2), Section 402(a)(1)(B), and in accordance with requirements established at 40 CFR 125.

B. Water Quality-based Effluent Limits

Statutory and Regulatory Basis

Section 301(b)(1)(C) of the CWA requires the development of limitations in permits necessary to meet water quality standards. Discharges to State or Tribal waters must also comply with limitations imposed by the State or Tribe as part of its certification of NPDES permits under section 401 of the CWA. Federal regulations at 40 CFR 122.4(d) prohibit the issuance of an NPDES permit that does not ensure compliance with the water quality standards of all affected States.

The NPDES regulation (40 CFR 122.44(d)(1)) implementing Section 301(b)(1)(C) of the CWA requires that permits include limits for all pollutants or parameters which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State or Tribal water quality standard, including narrative criteria for water quality, and that the level of water quality to be achieved by limits on point sources is derived from and complies with all applicable water quality standards.

The regulations require the permitting authority to make this evaluation using procedures which account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant in the effluent, species sensitivity (for toxicity), and where appropriate, dilution in the receiving water. The limits must be stringent enough to ensure that water quality standards are met, and must be consistent with any available wasteload allocation.

Reasonable Potential Analysis

When evaluating the effluent to determine if the pollutant parameters in the effluent are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State/Tribal water quality criterion, the EPA projects the receiving water concentration (downstream of where the effluent enters the receiving water) for each pollutant of concern. The EPA uses the concentration of the pollutant in the effluent and receiving water and, if appropriate, the dilution available from the receiving water, to project the receiving water concentration. If the projected concentration of the pollutant in the receiving water exceeds the numeric criterion for that specific pollutant, then the discharge has the reasonable potential to

cause or contribute to an excursion above the applicable water quality standard, and a water quality-based effluent limit is required.

Sometimes it may be appropriate to allow a small area of the receiving water to provide dilution of the effluent. These areas are called mixing zones. Mixing zone allowances will increase the mass loadings of the pollutant to the water body and will decrease treatment requirements. Mixing zones can be used only when there is adequate receiving water flow volume and the concentration of the pollutant in the receiving water is less than the criterion necessary to protect the designated uses of the water body. Mixing zones must be authorized by the State.

Procedure for Deriving Water Quality-based Effluent Limits

The first step in developing a water quality-based effluent limit is to develop a wasteload allocation (WLA) for the pollutant. A wasteload allocation is the concentration or loading of a pollutant that the permittee may discharge without causing or contributing to an exceedance of water quality standards in the receiving water. Wasteload allocations are determined in one of the following ways:

1. TMDL-Based Wasteload Allocation

Where the receiving water quality does not meet water quality standards, the wasteload allocation is generally based on a TMDL developed by the State. A TMDL is a determination of the amount of a pollutant from point, non-point, and natural background sources that may be discharged to a water body without causing the water body to exceed the criterion for that pollutant. Any loading above this capacity risks violating water quality standards.

To ensure these waters will come into compliance with water quality standards Section 303(d) of the CWA requires States to develop TMDLs for those water bodies that will not meet water quality standards even after the imposition of technology-based effluent limitations. The first step in establishing a TMDL is to determine the assimilative capacity (the loading of pollutant that a water body can assimilate without exceeding water quality standards). The next step is to divide the assimilative capacity into allocations for non-point sources (load allocations), point sources (wasteload allocations), natural background loadings, and a margin of safety to account for any uncertainties. Permit limitations are then developed for point sources that are consistent with the wasteload allocation for the point source.

2. Mixing zone based WLA

When the State authorizes a mixing zone for the discharge, the WLA is calculated by using a simple mass balance equation. The equation takes into account the available dilution provided by the mixing zone, and the background concentrations of the pollutant. The WLAs for temperature were derived using a mixing zone.

3. Criterion as the Wasteload Allocation

In some cases a mixing zone cannot be authorized, either because the receiving water is already at, or exceeds, the criterion, the receiving water flow is too low to provide dilution, or the facility can achieve the effluent limit without a mixing zone. In such cases, the criterion becomes the wasteload allocation. Establishing the criterion as the wasteload allocation ensures that the effluent discharge will not contribute to an exceedance of the criteria.

This is the case for Independent Meat. The 95th percentile receiving water temperature as measured at the USGS station 13092747 ROCK CREEK AB HWY 30/93 XING AT TWIN FALLS ID is 20°C. Since this is greater than the maximum daily average water quality standard of 19°C and the spawning season standard of 9°C Rock Creek already exceeds the temperature criterion and a mixing zone cannot be authorized. The water quality-based effluent limitation is therefore established at the criterion of a maximum daily average of 19°C and during the salmonid spawning season a maximum daily average of 9°C.

To meet this limit Independent Meat is planning to use the non-contact cooling water to irrigate their leased hay fields during the spring, summer and fall seasons to eliminate violating the water quality standard for temperature. Approximately 150 acres of hay ground and pasture are available for utilizing the cooling water to irrigate.

Appendix D: Reasonable Potential and Water Quality-Based Effluent Limit Calculations

Part A of this appendix explains the process the EPA has used to determine if the discharge authorized in the draft permit has the reasonable potential to cause or contribute to a violation of Washington's federally approved water quality standards. Part B demonstrates how the water quality-based effluent limits (WQBELs) in the draft permit were calculated.

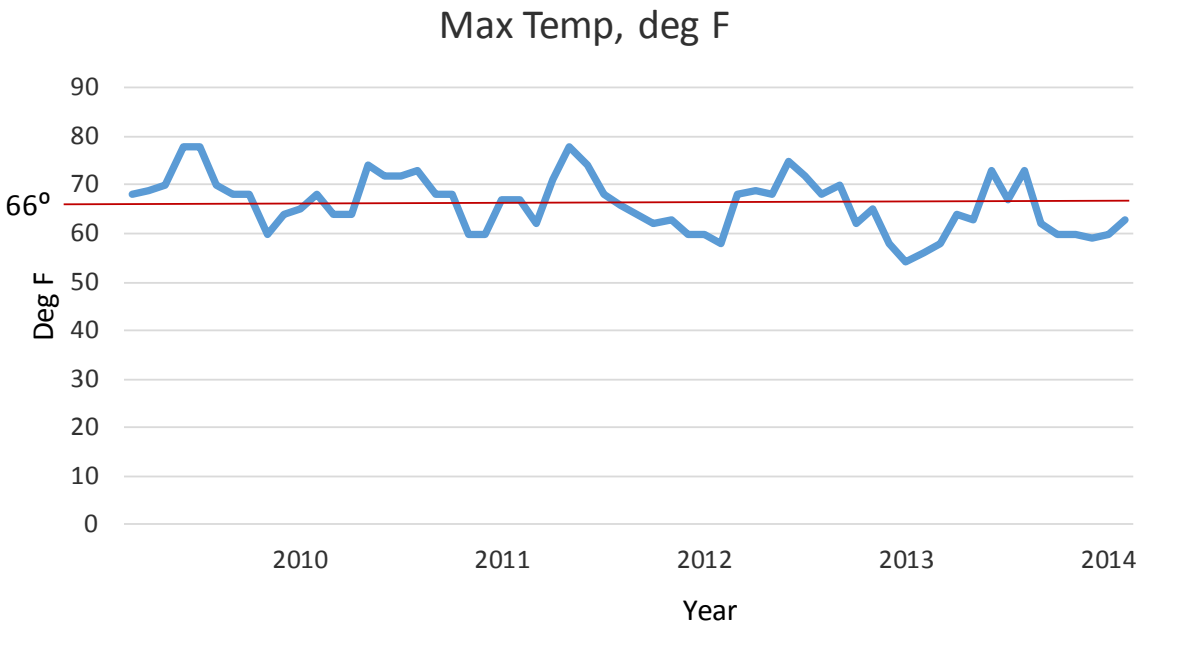
A. Reasonable Potential Analysis

The EPA uses the following method from the Department of Ecology 'process described in the *Technical Support Document for Water Quality-based Toxics Control* (EPA, 1991) to determine reasonable potential. To determine if there is reasonable potential for the discharge to cause or contribute to an exceedance of water quality criteria for a given pollutant, the EPA compares the maximum projected receiving water concentration to the water quality criteria for that pollutant. If the projected receiving water concentration exceeds the criteria, there is reasonable potential, and a water quality-based effluent limit must be included in the permit. This following section discusses how the maximum projected receiving water concentration is determined

As shown on the chart below, during the summer, discharges exceed the IDEQ maximum daily average standard for temperature of 19 ºC (66 °F).

Maximum Projected Effluent Concentration

A mixing zone cannot be used in the determination of the effluent to cause a violation of the water quality standards.



Freshwater Temperature Reasonable Potential

IDEQ Surface Water Quality Criteria for Aquatic Live Use Designation
IDAPA 58.01.02.250.02.b.:

"Water temperatures of twenty-two (22) degrees C or less with a maximum daily average of no greater than nineteen (19) degrees C."

And:

IDAPA 58.01.02.250.01.f:

"Salmonid Spawning. The Department shall determine spawning periods on a waterbody specific basis taking into account knowledge of local fisheries biologists, published literature, records of the Idaho Department of Fish and Game, and other appropriate records of spawning and incubation, as further described in the current version of the "Water Body Assessment Guidance" published by the Idaho Department of Environmental Quality. Waters designated for salmonid spawning, in areas used for spawning and during the time spawning and incubation occurs, are not to vary from the following characteristics due to human activities…

(ii) Water temperatures of thirteen (13) degrees C or less with a maximum daily average no greater than nine (9) degrees C.

Spawning Season: April, September and October (Upper Snake Rock – Five Year Review (Page 8, Idaho Department of Environmental Quality, April 2010)

The salmonids in Rock Creek are Brown Trout, Native Trout and Rainbow Trout. Bull Trout do not exist in Rock Creek (e-mail from Balthasar Buhidar, Ph.D., July 21, 2015 citing input from the Idaho Department of Fish and Game and the US Fish and Wildlife Service)

	Cold Water Critera	
INPUT		Data Source
Chronic Dilution Factor at Mixing Zone Boundary	1.0	USGS
Ambient Temperature (T) (Upstream Background)	20.0 °C	95th Percentile based on permittee or USGS data
Effluent Temperature	24.0 °C	95th Percentile of **monthly daily max effluent** based on daily max per DMR data
Aquatic Life Temperature WQ Criterion in Fresh Water	19.0 °C	Lowest daily max criteria
OUTPUT		
Temperature at Chronic Mixing Zone Boundary:	24.0 °C	Mass balance
Incremental Temperature Increase or decrease:	4.0 °C	WQS 401.c - allow for maximum of 0.3ºC rise in receiving water temperature.

Reasonable Potential

The discharge has reasonable potential to cause or contribute to an exceedance of water quality criteria if the maximum projected temperature at the edge of the mixing zone exceeds the most

stringent criterion for temperature. Since no mixing zone can be granted the reasonable potential is determined at the end of pipe.

Results of Reasonable Potential Calculations

It is determined that temperature has a reasonable potential to cause or contribute to an exceedance of water quality criteria for temperature. Since a mixing zone is not allowed Independent Meat must meet the water quality standard at the end of pipe. Effluent limitations are established at the end of the discharge pipe or from the effluent stream after the last treatment unit prior to discharge into Rock Creek as follows:

		Effluent Limitation
Parameter	**Units**	**Maximum Daily**
Temperature	°C	27[1] (80°F)
Temperature May 1 –August 31	°C	19[2]
Temperature November 1 – March 31	°C	19[2]
Temperature April 1- April 30	°C	9[2]
Temperature September 1 – October 31	°C	9[2]

[1]Interim limit lasting one year from the effective date of the permit
[2]Limit to be achieved within one year of the effective date of the permit

Appendix E –IDEQ Draft 401 Certification

Idaho Department of Environmental Quality

Draft §401 Water Quality Certification

September 10, 2015

NPDES Permit Number(s): ID-0000388 / Independent Meat

Receiving Water Body: Rock Creek

Pursuant to the provisions of Section 401(a)(1) of the Federal Water Pollution Control Act (Clean Water Act), as amended; 33 U.S.C. Section 1341(a)(1); and Idaho Code §§ 39-101 et seq. and 39-3601 et seq., the Idaho Department of Environmental Quality (DEQ) has authority to review National Pollutant Discharge Elimination System (NPDES) permits and issue water quality certification decisions.

Based upon its review of the above-referenced permit and associated fact sheet, DEQ certifies that if the permittee complies with the terms and conditions imposed by the permit along with the conditions set forth in this water quality certification, then there is reasonable assurance the discharge will comply with the applicable requirements of Sections 301, 302, 303, 306, and 307 of the Clean Water Act, the Idaho Water Quality Standards (WQS) (IDAPA 58.01.02), and other appropriate water quality requirements of state law.

This certification does not constitute authorization of the permitted activities by any other state or federal agency or private person or entity. This certification does not excuse the permit holder from the obligation to obtain any other necessary approvals, authorizations, or permits.

Antidegradation Review

The WQS contain an antidegradation policy providing three levels of protection to water bodies in Idaho (IDAPA 58.01.02.051).

- Tier 1 Protection. The first level of protection applies to all water bodies subject to Clean Water Act jurisdiction and ensures that existing uses of a water body and the level of water quality necessary to protect those existing uses will be maintained and protected (IDAPA 58.01.02.051.01; 58.01.02.052.01). Additionally, a Tier 1 review is performed for all new or reissued permits or licenses (IDAPA 58.01.02.052.07).
- Tier 2 Protection. The second level of protection applies to those water bodies considered high quality and ensures that no lowering of water quality will be allowed unless deemed necessary to accommodate important economic or social development (IDAPA 58.01.02.051.02; 58.01.02.052.08).
- Tier 3 Protection. The third level of protection applies to water bodies that have been designated outstanding resource waters and requires that activities not cause a lowering of water quality (IDAPA 58.01.02.051.03; 58.01.02.052.09).

DEQ is employing a water body by water body approach to implementing Idaho's antidegradation policy. This approach means that any water body fully supporting its beneficial uses will be considered high quality (IDAPA 58.01.02.052.05.a). Any water body not fully supporting its beneficial uses will be provided Tier 1 protection for that use, unless specific circumstances warranting Tier 2 protection are met (IDAPA 58.01.02.052.05.c). The most recent federally approved Integrated Report and supporting data are used to determine support status and the tier of protection (IDAPA 58.01.02.052.05).

Pollutants of Concern

The Independent Meat Company discharges the following pollutants of concern: water temperature from non-contact cooling water. Effluent limits have been developed for temperature (to commence on January 01, 2017). No effluent limits are proposed for other parameters as temperature is the only parameter of concern.

Receiving Water Body Level of Protection

The Independent Meat Company discharges to the Rock Creek waterbody within the Upper Snake Rock Subbasin assessment units (AUs) ID17040212SK013_04 and ID17040212SK013_05 (Rock Creek – River Mile 25 [Township 11 South, Range 18 East, Section 36] to mouth). These AUs have the following similar designated beneficial uses: cold water aquatic life, salmonid spawning, and primary & secondary contact recreation. In addition to these uses, all waters of the state are protected for agricultural and industrial water supply, wildlife habitat, and aesthetics (IDAPA 58.01.02.100).

The AU is listed in Category 4 of the 2012 Integrated Report. The aquatic life use is impaired. So also is the primary contact recreation. Causes of impairment for both AUs include fecal coliform, total phosphorus, sedimentation/siltation, total suspended solids, and other flow regime alterations. As such, DEQ will provide Tier 1 protection (IDAPA 58.01.02.051.01) for the aquatic life use and for the contact recreation use as an appropriate level of protection use using information available at this time (IDAPA 58.01.02.052.05.c).

Protection and Maintenance of Existing Uses (Tier 1 Protection)

As noted above, a Tier 1 review is performed for all new or reissued permits or licenses, applies to all waters subject to the jurisdiction of the Clean Water Act, and requires demonstration that existing uses and the level of water quality necessary to protect existing uses shall be maintained and protected. In order to protect and maintain designated and existing beneficial uses, a permitted discharge must comply with narrative and numeric criteria of the Idaho WQS, as well as other provisions of the WQS such as Section 055, which addresses water quality limited waters. The numeric and narrative criteria in the WQS are set at levels that ensure protection of designated beneficial uses. The effluent limitations and associated requirements contained in the Independent Meat Company permit are set at levels that ensure compliance with the narrative and numeric criteria in the WQS.

Water bodies not supporting existing or designated beneficial uses must be identified as water quality limited, and a total maximum daily load (TMDL) must be prepared for those pollutants causing impairment. A central purpose of TMDLs is to establish wasteload allocations for point

source discharges, which are set at levels designed to help restore the water body to a condition that supports existing and designated beneficial uses. Discharge permits must contain limitations that are consistent with wasteload allocations in the approved TMDL.

Prior to the development of the TMDL, the WQS require the application of the antidegradation policy and implementation provisions to maintain and protect uses (IDAPA 58.01.02.055.04).

The EPA-approved *Upper Snake Rock TMDL and Upper Snake Rock TMDL Modification* (2000 and 2005, respectively) establish wasteload allocations for bacteria, total suspended solids, sedimentation/siltation and total phosphorus. These wasteload allocations are designed to ensure the Rock Creek waterbody will achieve the water quality necessary to support its existing and designated aquatic life beneficial uses and comply with the applicable numeric and narrative criteria. However, a temperature TMDL was not developed because water temperature was not listed as a pollutant-of-concern. So EPA established end-of-pipe limitations based on the numeric WQS for temperature. Consequently, the effluent limitations and associated requirements contained in the Independent Meat Company NPDES permit are set at levels that comply with the numeric WQS for the aquatic life beneficial use of Rock Creek.

In sum, the effluent limitations and associated requirements contained in the Independent Meat Company NPDES permit are set at levels that ensure compliance with the narrative and numeric criteria in the WQS for temperature; and the wasteload allocations established in the *Upper Snake Rock TMDL and Upper Snake Rock TMDL Modification (2000 and 2005, respectively)* for the other pollutants (bacteria, TSS and TP). Therefore, DEQ has determined the permit will protect and maintain existing and designated beneficial uses in the Rock Creek waterbody in compliance with the Tier 1 provisions of Idaho's WQS (IDAPA 58.01.02.051.01 and 58.01.02.052.07). As such, DEQ will provide Tier 1 protection (IDAPA 58.01.02.051.01) for contact recreation use and provide and a Tier 1 protection for aquatic life use. Tier 2 protection does not apply because contact recreation is not supporting and this requires only Tier 1 protection.

Conditions Necessary to Ensure Compliance with Water Quality Standards or Other Appropriate Water Quality Requirements of State Law

Temperature limitations for the facility are based on the discharge of the facility into Rock Creek. At the point of discharge, Rock Creek is protected for the following designated uses: cold water aquatic life, salmonid spawning, primary contact recreation and secondary contact recreation (IDAPA 58.01.02.150.14). In addition, the Idaho WQS state that all waters of the State of Idaho are protected for industrial and agricultural water supply (Section 100.03.b and c), wildlife (Section 100.04) and aesthetics (Section 100.05). Additional numeric criteria necessary for the protection of aquatic life can be found at IDAPA 58.01.02.250 (Surface Water Quality Criteria for Aquatic Life use Designations). Numeric criteria necessary for the protection of recreation uses can be found at IDAPA 58.01.02.251 (Surface Water Quality Criteria for Recreation Use Designations).

Compliance Schedule. The EPA has determined that Independent Meat Company cannot immediately comply with the end-of-pipe water quality-based effluent limitations for water

temperature. Therefore, a compliance schedule is needful for temperature. EPA has established a one year compliance schedule to end on January 1, 2017. DEQ visited with the facility and determined that it is in the process of contracting with an engineer to determine what upgrades to the existing cooling water system will be required to retrofit it to meet the temperature limits. DEQ confirmed that it cannot meet the temperature limits immediately. So a one year compliance schedule seems appropriate. Therefore, an interim effluent limitation of 27°C (80°F) consistent with the existing permit has been established to ensure no increases in temperature discharges during the term of the compliance schedule. The interim effluent limitation is the same temperature limit that has been in place since 1978.

DEQ certifies a compliance schedule of one year, as described in the NPDES permit, to end on January 1, 2017, thus allowing the numeric temperature standards to become the permit limits for the facility. The water quality standard for temperature applicable to Rock Creek at the point of discharge is 22°C instantaneous or less with a maximum daily average of no greater than 19°C. White the schedule of compliance is in effect, the Permittee must comply with the interim limit and monitoring requirements as specified in the NPDES permit. Permit limits after the compliance schedule end are:

April 1 – April 30: 9°C
May 1 – August 31: 19°C
September 1 – October 31: 9°C
November 1 – March 31: 19°C

Mixing Zone. According to EPA's Reasonable Potential Analysis (Fact Sheet, Appendix D) the discharge of non-contact cooling water into Rock Creek has reasonable potential to cause or contribute to an exceedance of water quality criteria if the maximum projected temperature at the edge of the mixing zone exceeds the most stringent criterion for temperature. Therefore, no mixing zone can be granted; and the reasonable potential is determined at the end-of-pipe.

Other Conditions

This certification is conditioned upon the requirement that any material modification of the permit or the permitted activities—including without limitation, any modifications of the permit to reflect new or modified TMDLs, wasteload allocations, site-specific criteria, variances, or other new information—shall first be provided to DEQ for review to determine compliance with Idaho WQS and to provide additional certification pursuant to Section 401.

Right to Appeal Final Certification

The final Section 401 Water Quality Certification may be appealed by submitting a petition to initiate a contested case, pursuant to Idaho Code § 39-107(5) and the "Rules of Administrative Procedure before the Board of Environmental Quality" (IDAPA 58.01.23), within 35 days of the date of the final certification.

Questions or comments regarding the actions taken in this certification should be directed to Dr. Balthasar Buhidar, Twin Falls Regional Office, (208) – 736-2190, or at Balthasar.buhidar@deq.idaho.gov.

"DRAFT"

David Anderson
Regional Administrator
Twin Falls Regional Office