FACT SHEET

Public Comment Period Start Date: March 29, 2010
Public Comment Expiration Date: April 29, 2010

The United States Environmental Protection Agency (EPA)
Plans To Reissue A Draft National Pollutant Discharge Elimination System (NPDES) Permit

The City of Jerome
Wastewater Treatment Plant

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Permit No. ID002016-8

EPA is Reopening for Public Comment a Draft NPDES Permit

EPA is reopening the public comment period on the draft permit for the facility referenced above. Pursuant to 40 CFR 124.14(c), "Comments filed during the reopened comment period shall be limited to the substantial new questions that caused its reopening".

EPA is seeking public comment only on the question of not including pollutant trading provisions in the draft NPDES permit. The original public comment period was August 31, 2009 to September 30, 2009. Specifically, the current proposed draft permit does not include the following permit conditions:

Part I.B.1: Pollutant Trading. The permittee may engage in pollutant trading for average monthly discharges of total phosphorus, pursuant to the requirements in the "State of Idaho Department of Environmental Quality Pollutant Trading Guidance" (November, 2003 draft) as published by the Idaho Department of Environmental Quality. No trading is allowed to adjust discharges to meet average weekly limits or for other pollutants. This permit only authorizes trading between point sources in Segments 1, 2, and 3 in the Middle Snake River that have NPDES permits that authorize trading**.** Trading with non-point sources is not authorized. See Appendix A of this permit for details about the requirements for buying and selling pollutant credits and reporting such trades to EPA and the Idaho Department of Environmental Quality (IDEQ).

Appendix A "Pollutant Trading In The Upper Snake Rock Subbasin**" (**on pages 37-39 of the attached proposed draft permit).

State Certification for Facilities that Discharge to State Water

Section 401 of the federal Clean Water Act requires EPA to seek State certification before issuing a final permit. On November 25, 2009 the Idaho Department of Environmental Quality issued a

final Section 401 Water Quality Certification for the reissuance of the City of Jerome NPDES permit.

Basis of Reopening Public Comment

The pollutant trading provisions of the permit allow for trading of total phosphorus. The total phosphorus effluent limits of the permit were developed from the Upper Snake Rock TMDL, approved by EPA in 2000 and modified in 2005. The TMDL serves as the plan to achieve water quality standards in this river segment. A pollutant trading system must be consistent with the assumptions and goals of an established TMDL in order to achieve compliance with the water quality standards. TMDL wasteload allocations are commonly established on the foundation of a mathematical water quality model that takes into account the location, flow, and pollutant concentration of each source. The trading system must fit within the constraints of the TMDL and be consistent with assumptions about how the system functions and how compliance with standards will be evaluated.

The Snake River TMDL is designed to reduce inputs of phosphorus to the river and thereby reduce the growth of aquatic plants. Some TMDLs employ simple mass balance models that assume no loss of the pollutant from the water column. Others employ water quality models that estimate pollutant loss from the water column (through nutrient uptake by aquatic plants, settling of solids, etc.). This uptake is sometimes referred to as "attenuation" of the instream phosphorus concentration or load.

The Snake River TMDL employs a mass balance model with attenuation. A percentage of the instream phosphorus load is assumed to be lost in each segment. The loss term in the TMDL allows higher overall discharges into the river than would be calculated using a mass balance model without attenuation, because the attenuation provides a greater loading capacity to achieve the instream target concentration.

The attenuation factor in the TMDL complicates a pollutant trading system, because it alters the equivalency of phosphorus loading. Since phosphorus discharged is lost over distance, one pound of phosphorus discharged at one location is not equivalent to one pound discharged at another location. In general, a downstream source must purchase more than one pound of upstream load for each pound of allowance it receives. Otherwise, the transfer of allocated loads in the downstream direction will violate the assumptions of the TMDL and potentially exceed the instream target.

The Snake River water quality trading ratios were based on assumptions that did not include attenuation and were set to 1:1 for all trades, which would correspond to an equivalency of phosphorus discharges between locations. The assumptions used to establish the water quality trading ratios are not consistent with the attenuation assumptions of the TMDL. Water quality trading utilizing the 1:1 ratio poses a risk to the water quality improvements called for in the TMDL in this segment of the Snake River. Therefore, EPA has not included the trading mechanism from the City of Jerome permit because of this inconsistency.

Specifically, EPA has determined that Section I.B.1 and Appendix A would have authorized pollutant trading based on trading ratios that are not technically defensible based on the administrative record.

1. The trading ratios are in the "State of Idaho Department of Environmental Quality Pollutant Trading Guidance" (November 2003 draft). The trading ratios were derived in "Upper Snake Rock Subbasin – Middle Snake River Pollutant Trading Ratios" (IDEQ October 17, 2002). A flow weighted mass balance of surface water inputs, ground water inputs and point source inputs to the Snake River from the Twin Falls Municipality to below the Box Canyon Creek found uniformity or "equity" of phosphorus concentrations throughout the three segments. Based on this uniformity for all areas of these segments a

trading ratio of 1:1 was developed for all the segments.

2. The mass balance did not include any attenuation of phosphorus such as settling to the river bottom or plant uptake. However, "The Upper Snake Rock TMDL Modification, Upper Snake Rock Watershed Management Plan – Modification - A Modification of Mid-Snake TMDL and Upper Snake Rock TMDL to Account for the Aquaculture Wasteload Allocation of the Part 1 (Fish Production Faculties & Conservation Hatcheries), Part 2 (Fish Processors), and Part 3 (Billingsley Creek Facilities)" (IDEQ July 22, 2005) found on page 34 the following total phosphorus percent loss/attenuation:

Compliance Point	Loss/Attenuation
Milner Dam	
Pillar Falls	2.8%
Crystal Springs	32.4%
Box Canyon	18.3%

The percent reduction in phosphorus by attenuation does not support a trading ratio of 1:1 for this reach of the Snake River, which was the area where trading was to occur.

3. Idaho Department of Environmental Quality (IDEQ) staff has indicated to EPA its intent to revise the "State of Idaho Department of Environmental Quality Pollutant Trading Guidance" (November 2003 draft) and to produce final guidance.

Description of the Facility

The City of Jerome is located in South Central Idaho, in Jerome County. The City owns and operates a facility that treats wastewater from domestic, industrial, and commercial sources.

Flow is normally routed through two 3millimeter perforated plate screen Rotamats. Rags and other debris larger than 3 mm are removed. The flow then enters two grit chambers that slow the flow down to allow the grit to settle. Wastewater enters a bio-tower wet well and a percentage of wastewater is pumped over the bio-tower, which removes 65-70% of the soluble biological oxygen demand (BOD). A bio-tower is a packed tower of plastic media used for secondary treatment. Secondary treatment removes the organic matter in wastewater by using biological treatment processes. In this attached growth or fixed film process, the microbial growth occurs on the surface of the plastic media in the packed tower. The biomass forms as a jelly-like mass or slime layer over the surface of the media. The mass consists of microorganisms, primarily bacteria, which feed on the organic waste products contained in the process flow. As the liquid passes over the surface of the biomass, the bacteria feed on and digest these wastes, transforming and breaking them down into more treatable, less oxygen demanding and less polluting forms of matter. However, portions of the biomass also slough off the media and must settle out in secondary treatment tanks.

Some bio-tower effluent is returned to the bio-tower wet well for recycle flow back to the bio-tower to maintain a constant wetting rate with the remainder of the flow mixed with influent and sent to the aeration basins. Recycled flow from the Membrane Basins is mixed with the flow from the Bio-Tower in the aeration basins where dissolved oxygen is added.

In the aeration tank, wastewater is vigorously mixed with air and microorganisms acclimated to the wastewater in a suspension for several hours. This allows the bacteria and other microorganisms to break down the organic matter in the wastewater. The microorganisms grow

in number and the excess biomass is removed by settling before the effluent is sent to the membrane bioreactors. Now activated with millions of additional aerobic bacteria, some of the biomass is used again by returning it for mixing with incoming wastewater. The aeration basin mixed liquor is then pumped from the recycle pump building to the membrane bioreactors (MBR).

The facility was upgraded with the addition of the membrane bioreactor that went on line in January, 2008. MBR is the combination of a membrane process for microfiltration with a suspended growth bioreactor. The January 2008 upgrade included the Biological Nutrient Removal process or BNR. It consists of alum flocculation and coagulation. The facility provides secondary treatment for an estimated service total population of 9,300.

The facility receives industrial wastewater from three significant industrial users that are also categorical industrial users under 40 CFR §405.

- Jerome Cheese Company division of Davisco, manufactures cheese from whole unpasteurized milk, discharges 0.76 mgd intermittently to the plant
- Idaho Milk Products manufactures protein powder, dry milk from whole milk, discharges 0.4 mgd intermittently to the plant.
- Darigold Inc. manufactures powdered nonfat milk, condensed whole milk, cream separated ice cream from whole milk, discharges 0.438 mgd intermittently to the plant.

The WWTP has a design flow rate of 3.0 million gallons per day (mgd).

Public Comment

Persons wishing to comment or request a Public Hearing on the removal of Part I.B.1 and Appendix A from the 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 EPA as described in the Public Comments Section of the attached Public Notice.

After the Public Notice expires, and all comments have been considered, EPA's Regional Director for the Office of Water and Watersheds will make a final decision regarding the reissued permit. If no substantive comments are received, the tentative decision to not include trading will become final upon issuance and the draft permit will become effective upon issuance. If comments are received, EPA will address the comments. The permit will become effective 30 days after the date of issuance, unless an appeal is submitted to the Environmental Appeals Board within 30 days.

Documents are Available for Review.

The draft permit and fact sheet are posted on the Region 10 website at http://yosemite.epa.gov/r10/WATER.NSF/NPDES+Permits/DraftPermitsID Copies may also be requested by writing to EPA at the Seattle address below, by e-mailing washington.audrey@epa.gov, or by calling Audrey Washington at 206-553-0523 or (800) 424-4372 ext 0523 (within Alaska, Idaho, Oregon, & Washington). Copies may also be inspected and copied at the offices below between 8:30 a.m. and 4:00 P.M., Monday through Friday, except federal holidays. In Seattle, visitors report to the 12th floor Public Information Center.

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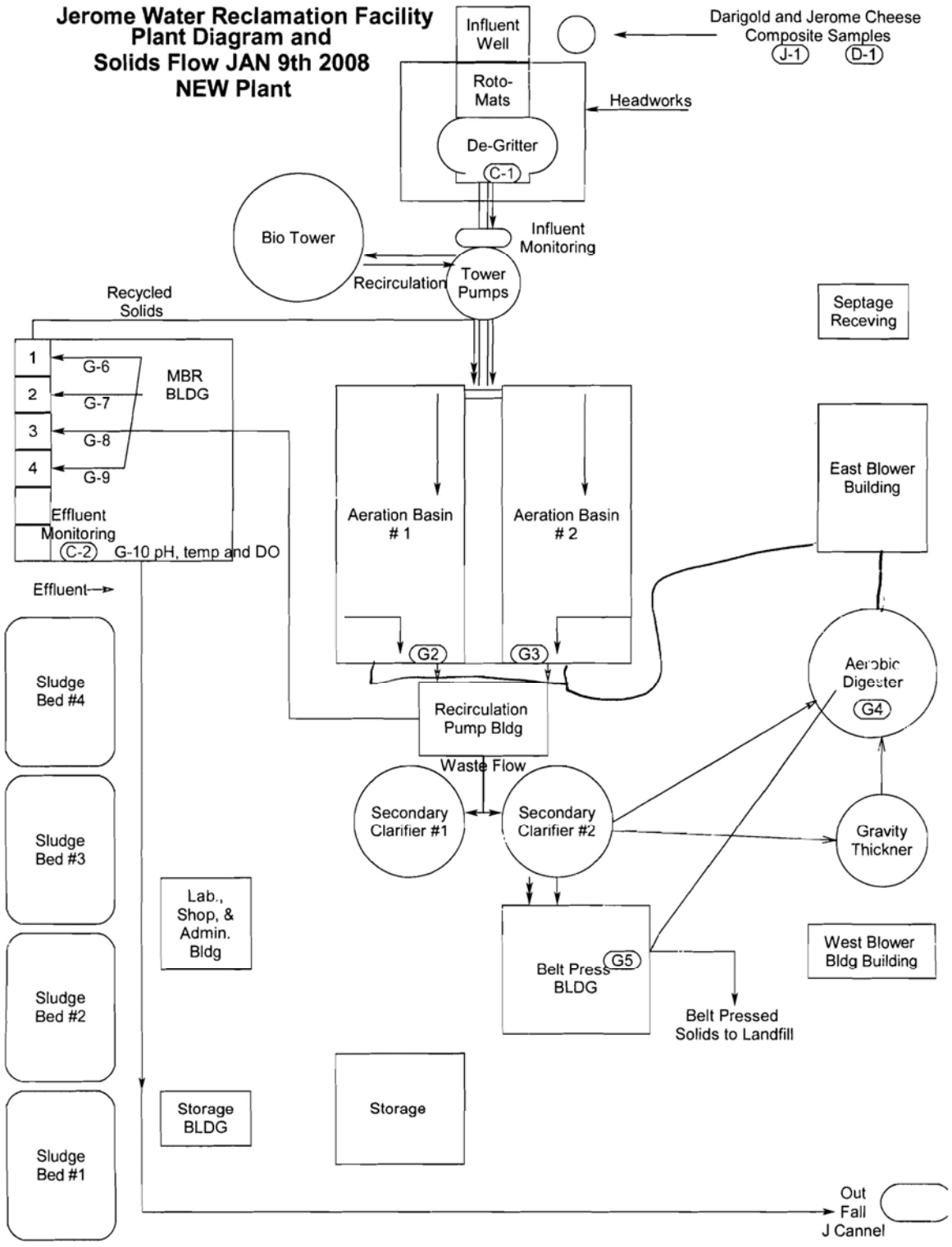
Jerome Water Reclamation Facility
Plant Diagram and
Solids Flow JAN 9th 2008
NEW Plant
Influent Well
Darigold and Jerome Cheese Composite Samples
J-1
D-1
Roto-Mats
Headworks
De-Gritter
C-1
Bio Tower
Influent Monitoring
Recirculation
Tower Pumps
Recycled Solids
Septage Receving
1
2
3
4
G-6
G-7
G-8
G-9
MBR BLDG
Effluent Monitoring
C-2
G-10 pH, temp and DO
Aeration Basin # 1
Aeration Basin # 2
East Blower Building
Effluent
G2
G3
Aerobic Digester
G4
Sludge Bed #4
Recirculation Pump Bldg
Waste Flow
Secondary Clarifier #1
Secondary Clarifier #2
Gravity Thickner
Sludge Bed #3
Lab., Shop, & Admin. Bldg
West Blower Bldg Building
Belt Press BLDG
G5
Belt Pressed Solids to Landfill
Sludge Bed #2
Storage BLDG
Storage
Sludge Bed #1
Out Fall
J Cannel

Discharge Points to Snake River