WOLFDEN

RESOURCES INC.

January 31, 2006

Mr. Philippe diPizzo
Chief Executive Officer
Nunavut Water Board
P.O. Box 119
Gjoa Haven
Nunavut. X0B 1J0

Dear Mr. DiPizzo,

Re: Water License NWB1ULU008 - Ulu Advanced Exploration Project Sewage Treatment and Solid Waste Disposal Facilities Operation and Maintenance Plan - REVISED

Attached please find a copy of the final report titled "*Ulu Advanced Exploration Project Sewage Treatment and Solid Waste Disposal Facilities Operation and Maintenance Plan*". The attached plan has been revised from an earlier version, dated February 2005, and addresses each of the comments provided by the Nunavut Water Board in their November 7, 2005 letter to Wolfden Resources Inc.

This plan has been developed as a requirement of Water License NBW1ULU0008, Part H, Section 1, in accordance with the Municipal and Community Affairs "*Guidelines for Preparing an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities*" dated October 1996.

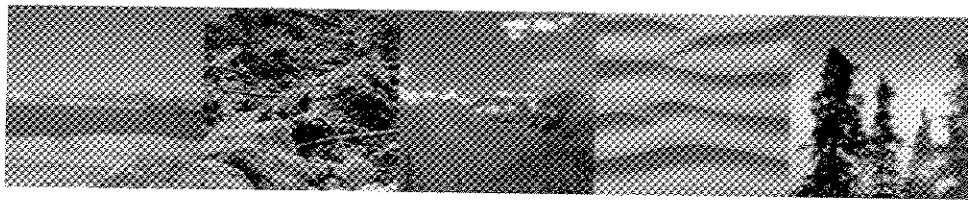
We trust that this information is satisfactory to the Board; however, if there are further questions or comments, I can be reached by telephone in Thunder Bay at (807) 346-2762, or by email at dave.stevenson@wolfdenresources.com.

Yours truly,

for David.B.Stevenson, M.Sc., P.Geo.
Mine Manager, Ulu
Wolfden Resources Inc.

309 Court St S., Thunder Bay, Ontario P7J 2Y1 Tel. (807) 346-1668 Fax (807) 345-0284

Ulu Advanced Exploration Project Sewage Treatment and Solid Waste Disposal Facilities Operation and Maintainenance Plan - REVISED



Prepared for
Wolfden Resources Inc.

Submitted by
Gartner Lee Limited

January 2006

Gartner Lee

Ulu Advanced Exploration Project Sewage Treatment and Solid Waste Disposal Facilities Operation and Maintainenance Plan - REVISED

Prepared for
Wolfden Resources Inc.

January 2006

Reference: **GLL 51-035**

Distribution:
1 Nunavut Water Board
1 Wolfden Resources
1 Gartner Lee Limited

Gartner Lee

Gartner Lee Limited

January 31, 2006

Dave Stevenson
Wolfden Resources Inc.
309 Court Street South
Thunder Bay, Ontario P7J 1H1

Dear Mr. Stevenson:

Re: 51035 – Ulu Advanced Exploration Project Sewage Treatment and Solid Waste Disposal Facilities Operation and Maintenance Plan - REVISED

Attached please find a copy of the final report titled "Ulu Advanced Exploration Project Sewage Treatment and Solid Waste Disposal Facilities Operation and Maintenance Plan". The attached plan has been revised from an earlier version, dated February 2005, to address each of the comments provided by the Nunavut Water Board in their November 7, 2005 letter to Wolfden Resources.

This plan has been developed as a requirement of Water Licence NBW1ULU0008, Part H, Section 1, in accordance with the Municipal and Community Affairs "*Guidelines for Preparing an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities*" dated October 1996.

Yours very truly,
GARTNER LEE LIMITED

Don McCallum, MASc., P.Eng.
Senior Environmental Engineer

DM:gc

(51035 Final Revised Report on LH OM Plan Feb 2-2006.doc)

Sperling Plaza, 6400 Roberts Street, Suite 490, Burnaby, BC, V5G 4C9 tel 604.299.4144 fax 604.299.1455
www.gartnerlee.com

Table of Contents

Letter of Transmittal

List of Figures

List of Tables

Appendices

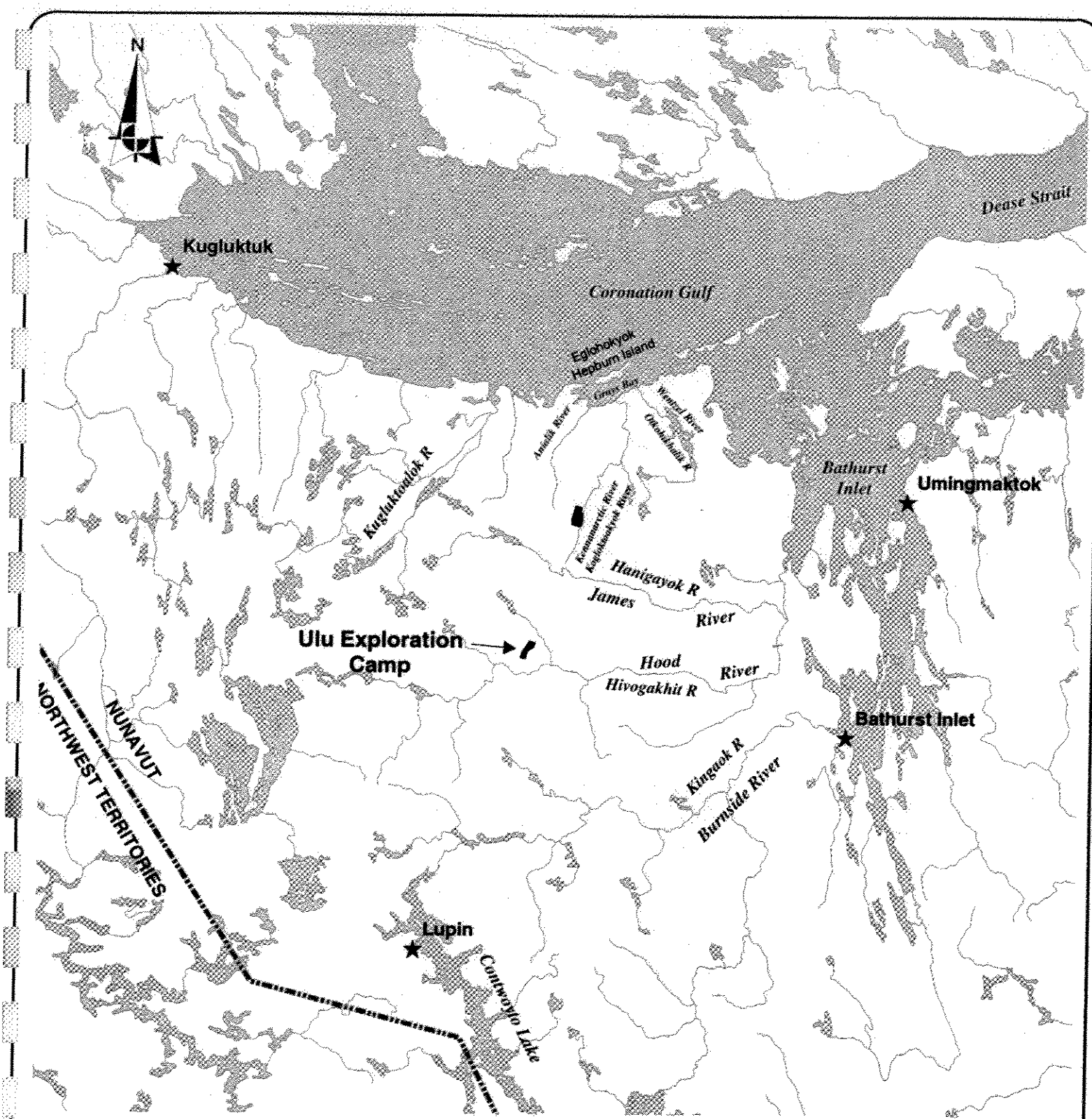
1. Introduction

The purpose of this plan is to guide the operations and maintenance activities associated with the sewage treatment facility located at Wolfden Resources, Ulu project exploration camp. The contents of this plan are based on "Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories" (NWT 1996) and address conditions included in Water License #NWB1ULU0008 issued by the Nunavut Water Board (Part D, section 19; Part H, section 1).

1.1 General Site Information

The Ulu exploration project is located approximately 150 km north of Lupin Mine (Figure 1) on Inuit Owned lands within the Hood River watershed in the Kitikmeot region of Nunavut at longitude 110°58'W and latitude 66°55'N. The site is located in the treeless arctic tundra where rock and glacial features dominate the landscape, accessible year-round only by aircraft. Bulk items were brought on site via winter road and during exploration activity, day to day supplies are flown to the camp. The area is characterized by severe climate with typical temperatures ranging throughout the year between $-50^{\circ}C$ in winter to $+30^{\circ}C$ in summer. Permafrost in this area generally extends to several hundred metres.

The facilities at the Ulu project (Figure 2) consist of a "Weatherhaven" camp with sleeping, dining and recreation quarters (50-person capacity), a vehicle repair shop, power house, warehouse, cold storage, office and change rooms. Also at the site are a fuel storage tank farm, fresh water and sewage systems, garbage incinerator and ore storage area. The camp is expected to accommodate 40-50 staff during the 8-month exploration season (March – October).



Legend

★ Community

Kilometers

0 10 20 40 60 80 100

1:2,000,000

Projection:
Canada NRCan Lambert Conformal Conic

Reviewed By: SH
Prepared By: PW
Date Issued: February 4, 2005
Project No.: 41-013
File Name:
P41013_B1_01_ULU_05bFeb03.mxd
Revision: 0

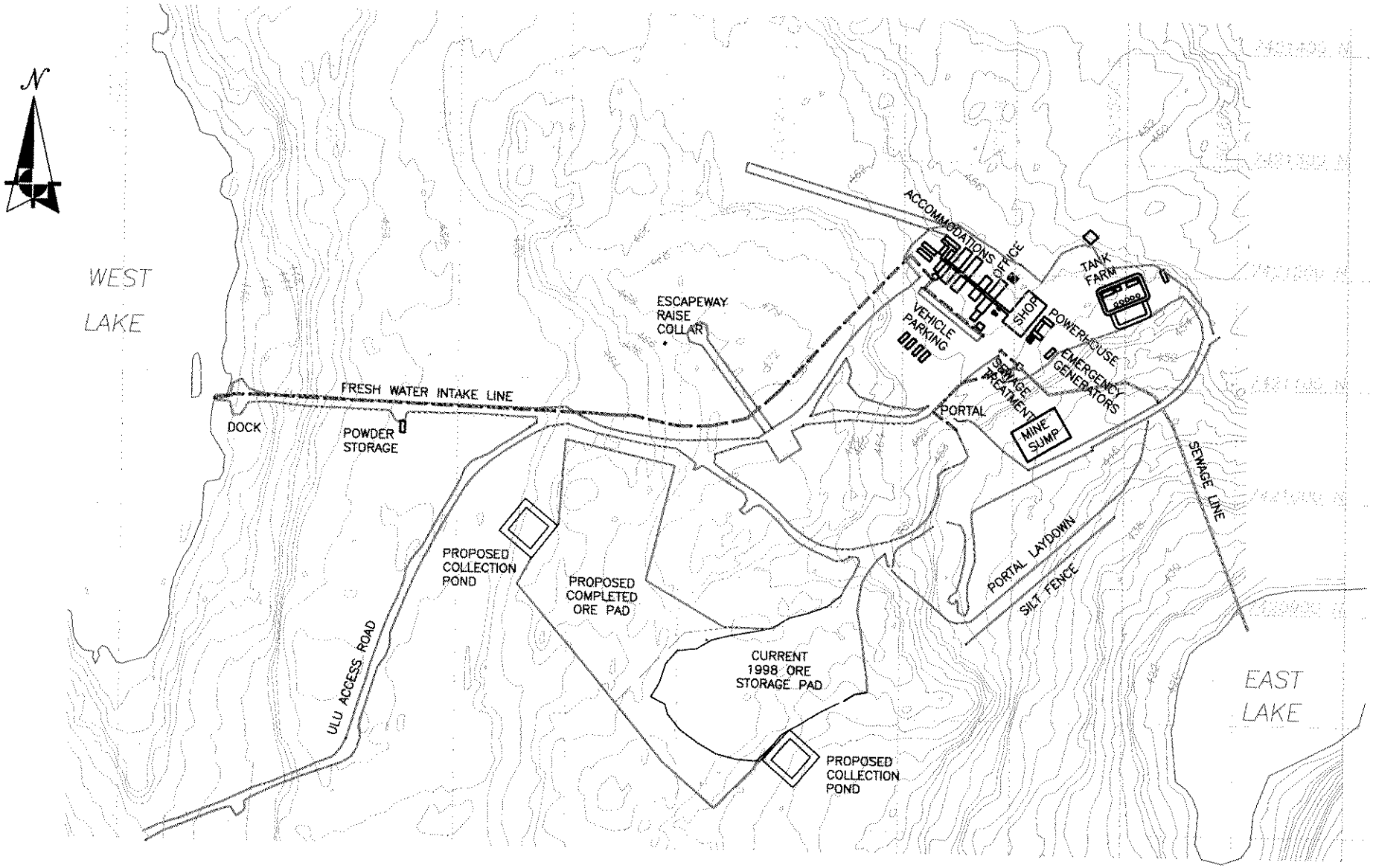
WOLFDEN resources inc.

Project: High Lake – Ulu Water Licence
Location: High Lake, Nunavut
Client: Wolfden Resources Ltd.

LOCATION MAP

Gartner Lee

Figure No.
1



LEGEND:

0 50 100 200 Metres

SCALE 1:5000

SOURCE OF DRAWING:

ECHO BAY MINES
DRAWING ULUSITE.DWG 1:2,000
SCALE
DATED 96/12/31

ECHO BAY MINES DRAWING
ULUTOPO.DWG
"ULU MINESITE AS SURVEYED"
FIGURE NO. 3
1998?

PROJECTION:	UTM NAD 83 ZONE 12
DRAWING INFORMATION:	
REVIEWED BY:	SH
DRAWN BY:	PW
DATE ISSUED:	FEBRUARY 7, 2005
PROJECT NUMBER:	41-013
FILE NAME:	41013-1D-01.DWG
REVISION:	

Project: High Lake - Ulu Water Licence
Location: High Lake, Nunavut
Client: Wolfden Resources Ltd.

ULU EXPLORATION CAMP LAYOUT

Gartner Lee

FIGURE NO. 2

2. Background

Echo Bay Mines Ltd. purchased the Ulu site lease from BHP in 1995 with plans to develop the property into a satellite mine for additional mill feed to the Lupin mill. An underground development, diamond drilling, and bulk sample program was initiated in 1996 to provide infill geological information. Echo Bay temporarily shut down the Ulu Project site in September 1997. Wolfden Resources purchased the Ulu Project in February 2004.

Drinking water for the camp site is obtained from West Lake via an insulated two-inch pipeline approximately 680 metres in length (Figure 2). Water is pumped from the lake using a 7 hp submersible electric pump installed on a floating dock. Two water storage tanks are present at the site; a 27,000 litre tank for general water use and a 63,000 litre tank for fire water storage. Water consumption for camp and exploration purposes is expected to be less than 50 m^3 per day.

Sewage and domestic wastewater from the camp facilities is treated on-site using a Rotating Biological Contactor (RBC) process. The treatment system, described in more detail in Section 3, is an aerobic, fixed-film biological treatment process designed to remove both biochemical oxygen demand (BOD) and total suspended solids (TSS) from the wastewater. Treated sewage effluent is discharged to East Lake via a 550 metre, insulated two-inch pipeline (Figure 2). Design conditions for the sewage treatment unit are based on 50 camp residents and include the following design parameters (see Appendix B for design brief):

- Peak day hydraulic capacity: 11.4 m^3/day
- Peak hour hydraulic capacity: 1.9 m^3/hour
- BOD influent concentration: 250 mg/L
- TSS influent concentration: 250 mg/L
- BOD effluent concentration: 25 mg/L
- TSS effluent concentration: 25 mg/L

3. Sewage Treatment Facility Operation and Maintenance

3.1 Site Drainage and Hydrology

Treated sewage effluent is discharged to East Lake, as illustrated in Figure 2. The 1.8 ha lake also receives surface water runoff from the camp site area. There are no defined inlet or outlet streams associated with the lake. However, some subsurface drainage from East Lake to Ulu Lake is expected to occur. The lake has a maximum water capacity of 40,900 m^3, corresponding to a maximum water depth of 6.2 metres. The small size and isolated position of the waterbody, and barriers to fish passage are assumed to preclude the existence of fish in East Lake. In 2005, Gartner Lee Ltd. consultants installed gill nets in East Lake to determine whether the lake contained fish but none were encountered.

3.2 Treatment System Description

The sewage treatment plant employed at this facility is a skid-mounted Rotordisk™ system (Model S30) supplied by Seprotech Systems Incorporated (Figure 3). The fully-contained system is comprised of a primary settlement tank, a Rotating Biological Contact (RBC) tank, and a secondary settling tank.

Raw sewage is pumped into the primary settlement tank (6.09 m^3 capacity), whereby heavy solids are retained through gravity settling and thickening. Supernatant from the primary settlement tank enters the RBC tank (1.70 m^3 capacity) through an inlet slot located at the front section of the RBC tank. The RBC tank is made up of four stages, or disk banks. The four separate disk banks are mounted on a common rotating shaft. As the disk banks are only partially submerged, the rotation serves to provide continual aeration for the fixed film biological growth and filtering process (which occurs on the disk banks). The first disk bank represents 40% of the total RBC surface area and is responsible for the most significant reduction in BOD. Subsequently, the accumulation of biological growth will be the greatest on the first disk bank and gradually decrease through subsequent sections. The growth will be generally thick and often filamentous on the 1st disk bank, becoming thinner and more compact on stages 2 through 4. Under certain operating conditions, nitrifying bacteria may become dominant in the 3rd and 4th disk banks. The 4th disk bank has a recirculation device that allows well-aerated liquid to be recycled to the primary settlement tank. Treated water from the RBC enters the secondary settlement tank (2.69 m^3 capacity), whereby biomass sloughed from the disks and other suspended solids settle through gravity. Clarified effluent is discharged from the treatment unit through a 4-inch outlet pipe.