

Projekt



Turingen

Lake Turingen Remedial Project

Isolation of mercury contaminated sediment



LIFE ENVIRONMENT

Project No. LIFE98 ENV/S/000477

Progress Report No. 7

March 13, 2002

Municipality of Nykvarn

Sweden



LIFE Project Number
LIFE98 ENV/S/000477

PROGRESS REPORT No. 7
Covering project activities from 30/06/2001 to 31/12/2001

Reporting Date
13/03/2002

LIFE PROJECT NAME
Lake Turingen Remedial Project

Project Data

Project location:	Nykvarn, Sweden
Project start date:	01/02/1998
Project end date:	01/02/2003
Extension date:	30/04/2003 (Final report)
Total Project duration (in months):	60 months
Extension duration (in months):	3 months
Total revised budget:	SEK 50,400,000.00
EC contribution:	€ 890,422.15
(%) of total costs:	15.40
(%) of eligible costs:	27.62

Beneficiary Data

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TABLE OF CONTENTS

Executive Summary5

Project Management5

 General.....5

 Legal Issues.....5

Technical Development5

 Investigations5

 Environmental monitoring6

 Remedial Construction.....6

Problems encountered or foreseen.....7

Dissemination.....7

Expected progress up to 30/06/20027

Financial situation.....8

Scheduling8

Statement of submission.....8

Appendices

 Expenditure report Appendix 1

 Time Schedule Appendix 2

Executive Summary

The primary objective of the Lake Turingen Remedial Project is to isolate between 90 and 95% of the mercury-contaminated sediments found in the lake and in the river Turingeån from the aquatic environment. The most important activities and results from the reporting period ended December 31, 2002 are:

- Ongoing preparations for Stage 2 construction (placement of artificial sediment on lake bottoms)
- Continued indications of positive results from Stage 1 construction (capping with sand and gravel of lake bottoms near the mouth of the river).

Project Management

General

The project management group – consisting of the project manager, project administrator, financial administrator, dissemination coordinator, and task managers – held three meetings during the reporting period.

The European Commission approved the project's revised budget on September 25, 2001. A second payment from the Commission was received in November 2001.

Legal Issues

The legal issues task has been terminated and no other legal issues are anticipated.

Technical Development

Investigations

Remediation of the river Turingeån, carried out in 1995-96, focused on two reservoirs containing an estimated 90-95% of all mercury found in riverbed sediments. The quantity of mercury remaining in other areas of the river was estimated to be less than 5 kg. The project's application for Life funding listed those facts and stated that "these efforts have significantly reduced the amount of Hg in circulation upriver of the lake."

During and after Stage 1 remediation of the lake (capping of bottom sediments near the river mouth), the project's monitoring program has periodically noted higher-than-expected concentrations of mercury in river water. It is important to investigate the underlying reasons for such variations. A study was therefore initiated in Autumn 2001 to try to locate the source or sources of mercury that are still being transported to the lake by the river. This investigation is underway and additional sampling will be performed during Spring 2002. At the present time, it is therefore premature to form any conclusions regarding the possible need for supplementary remedial action.

No other activities are currently ongoing or planned within the investigations task.

Environmental monitoring

The evaluation phase following Stage 1 remediation has continued through the most recent reporting period. Results continue to indicate that Stage 1 activities have led to a decrease in the flow of mercury-contaminated particles from the area that was capped, see Figure 1.

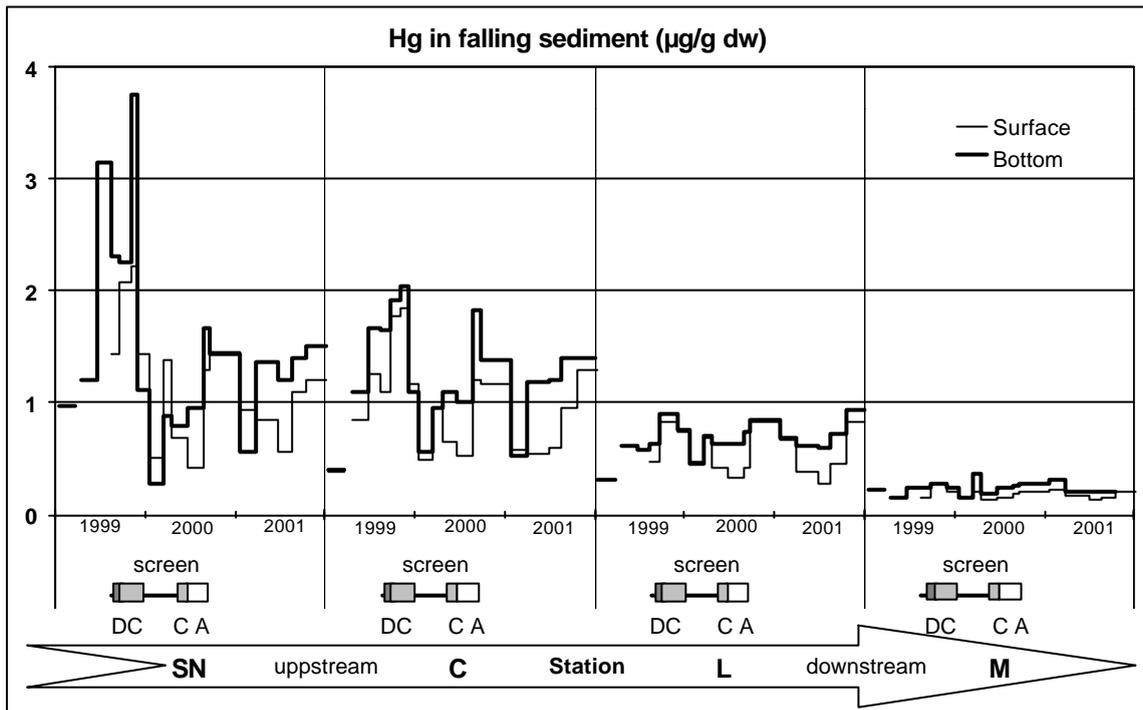


Figure 1. Mercury in falling sediment (D = dredging, C = capping, A = adjustments). Horizontal line lengths represent periods during which sediment was collected.

Other monitoring activities continue as planned. Adjustments will be made as dictated by progress in remedial construction and results obtained through previous monitoring. A monitoring report will be issued during Spring 2002.

Remedial Construction

The contractor has continued purchasing and assembly of necessary equipment, but did not complete this work prior to the onset of winter. The anticipated testing of equipment for producing artificial sediment and full-scale test capping was therefore not performed. Internal testing and capping of the designated test area required under the contract, will therefore not take place until Spring 2002. The contractor has assured project management that, in spite of the delays, its equipment and procedures have sufficient capacity to complete capping of all lake bottoms in accordance with the specifications and contractual requirements.

Problems encountered or foreseen

The most significant problem encountered during this reporting period was the ongoing construction delay mentioned above. Further remediation was therefore postponed until 2002. As mentioned in Progress Report 6, this means that project management no longer has the option of following up an initial phase of gel capping and subsequently having the contractor enact appropriate changes to his equipment, methodology or materials. In addition, the effects of winter conditions on the behavior and durability of a full-scale gel cap will remain unknown until after all remedial work has been completed.

The contractual situation is such that at present, project management can envision no circumstances that would entail an extension of the project beyond its planned completion date.

Dissemination

Dissemination activities have proceeded as planned. Activities during the reporting period included:

- Continued revision of the project's Internet web site, linked from the municipal home page at <http://www.nykvarn.se>.
- Continued work on video documentation of the progress of remedial activities.
- Revision/updating of project poster presentation.

Due to the lack of ongoing remediation, no site visits were organized during the current reporting period. Nor was an additional project newsletter issued. Planning continues for a project seminar regarding remediation of contaminated sediments. Due to delays in remedial construction, the event was postponed to September 2002.

Expected progress up to 30/06/2002

During the next reporting period, significant progress is expected in the following areas:

- Final assembly and testing of equipment for production of artificial sediment.
- Full-scale capping of test area.
- Approximately one month of production capping with artificial sediment.
- Continued investigation of mercury sources in riverbed upstream of lake.
- Environmental monitoring report for the evaluation phase after Stage 1.
- Issuance of fifth project newsletter.
- Site visits.
- Detailed planning for project seminar.

Financial situation

The financial status of the project per December 31, 2001 is shown in the expenditure report in Appendix 1. Approximately 62 % of budgeted funds have been expended, and all budget lines are in general accordance with the budget as approved by the European Commission.

Scheduling

A comparison between planned and actual progress is shown in Appendix 2. The primary discrepancy at this time concerns the contractor's completion of testing and the start of actual capping. However, the project is still following its overall time schedule. Project management is confident that overall completion of the project is not threatened.

Statement of submission

The undersigned submits this progress report on the date shown below and asserts that it accurately represents the status of the project on December 31, 2001 in all pertinent regards.

Nykvarn, Sweden

March 13, 2002

Ronald Bergman

Lake Turingen Remedial Project

Project Manager