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- 3) The population used for the Trow raw water study is 12,000 persons. (Page 3 of the Trow Raw Water Supply and Storage Review report)
- 4) The current available capacity of the reservoir is 1,076,000 cubic meters when full. (Page 14 of the Trow Raw Water Supply and Storage Review report)
- 5) The winter capacity of the reservoir is 541,000 cubic meters assuming an ice thickness of 2.0 meters. (Page 21, Table 12 of the Raw Water Supply and Storage Review report using an elevation of 107.0 meters)
- 6) The time period defined as winter is from October 1 to May 31 which spans a period of 244 days. (Page 13 of the Trow Raw Water Supply and Storage Review report)
- 7) The Table in Appendix A of the Trow Raw Water Supply and Storage Review report notes the effects of drawdown on the reservoir over the winter months.
- 8) The Lake Geraldine watershed covers approximately 385 hectares (Page 13 of the Trow Raw Water Supply and Storage Review report)
- 9) Section 3 of the Trow Raw Water Supply and Storage Review report discusses the precipitation values and the drainage basin calculations.
- 10) The precipitation levels for 5, 20, and 100 year low occurrences are identified in Table 7 of the Trow Raw Water Supply and Storage Review report.
- 11) The boundaries of the watershed are shown on Figure 2 of the Trow Raw Water Supply and Storage Review report.
- 12) The City believes the requested information has been provided to the NWB.

#### b. Conservation

The City currently has a number of domestic water bleeds in the utilidor system. The purpose of the bleeds is to ensure the water lines do not freeze in areas where the utilidor is not in a loop. A large number of these bleeds have been removed in the past several years during upgrades to the utilidor. The City will not be in a position to eliminate all of the bleeds until the entire City has been converted to utilidor.

The City does not have a water conservation public education strategy for the general population.





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### c. Water Storage

The City is in the process of designing modifications to the existing Lake Geraldine reservoir through the lifting of the dam and berms. These modifications will increase the storage capacity of the reservoir. The construction is scheduled to commence in 2005 and is scheduled to be completed in 2006.

The lifting of the dam will increase the capacity of the reservoir to a level which is projected to meet the City's needs until the year 2023.

After the dam has been raised, an alternate source will be required to top up the reservoir prior to the winter months in future years. The schedule for identification of the source and construction of any required infrastructure works for this is outside the timeline of this license.

Prior to construction the City will submit the design for the raising of the dam including plans for the prevention of sediments into water downstream from the reservoir.

### d. Dam Safety

The City is currently searching their archives for information on dam alterations. While we will endeavor to provide this information prior to Christmas Break, realistically we will likely not be in a position to provide the information until January 2005.

The City is also searching our archives for an Operations and Maintenance Manual and/or Emergency Preparedness Plan for the dam. If we are unable to locate these documents, they will need to be prepared by the City or an outside consultant. The timeline for submission of this information if it needs to be prepared from scratch would be approximately June 2005.

- 1) As Built Drawings – The City is searching for these files and will either provide them to the NWB or notify the NWB of their lack of existence by November 30, 2004.
- 2) Summary of Dam Repairs – we will compile a list of repairs undertaken to date, to the best of our ability, and submit this to the NWB by November 30, 2004.
- 3) Reservoir operating history – The City is not aware of any historical records with respect to water levels and ice levels in the Lake Geraldine Reservoir.

### e. Water Treatment

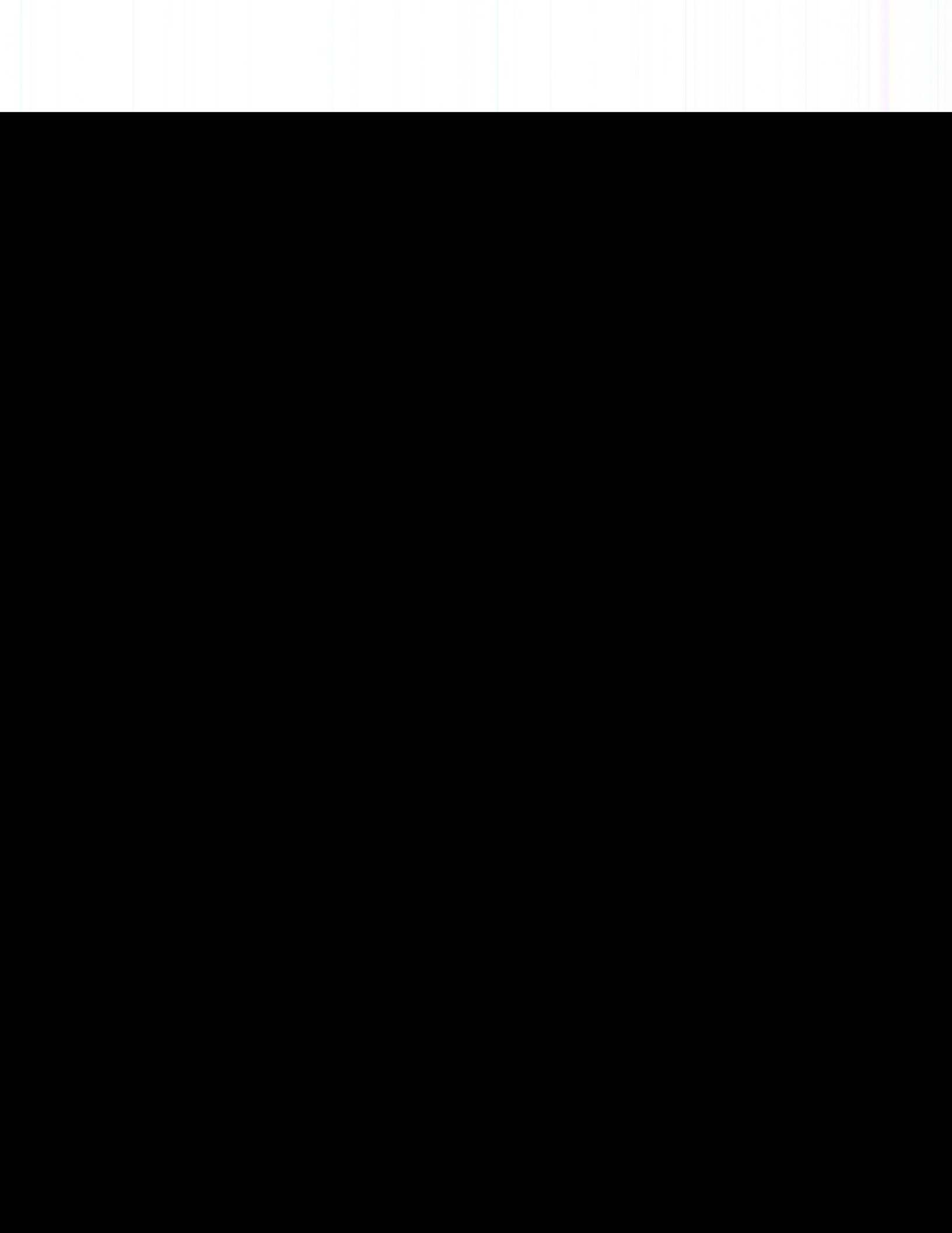
The City will submit the "as-built" drawings for the water treatment plant once they are received by the City. We anticipate receipt in January of 2005.

## III. Waste Disposal

### a. Sewage

#### i) Current Lagoon







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The current lagoon does not meet the requirements of the applicable effluent quality standards. The laboratory analysis confirming this, if available, will be provided to the NWB by November 30, 2004. If discharge data is not available the City will collect a sample of the effluent and have it analyzed for the parameters requested by the NWB. It is the opinion of the City administration that any efforts put into attempting to identify a means of making the lagoon more efficient would be redundant as the new sewage treatment plant will be operational in 2006.

- 1) Administration will compile, to the best of our ability, a list and overview of repairs completed on the sewage lagoon and present this to the NWB by November 30, 2004.
- 2) The City will review its files and where possible, provide the documentation supporting the monitoring of the piezometric, freeboard level and detailed geotechnical and hydrological analysis undertaken since the completion of the Lagoon Safety Review. This will be provided to the NWB by November 30, 2004.
- 3) If available the City will provide as built drawings and dyke cross sections to the NWB by November 30, 2004.
- 4) If available the City will provide a site topographical map to the NWB by November 30, 2004.

The City will provide the NWB an update on the status of the Operations and Maintenance manual for the Sewage Lagoon by November 30, 2004.

The City will provide the NWB an update on the status of the revised Spill Contingency Plan for the Sewage Lagoon by November 30, 2004.

#### ii) Proposed Wastewater Treatment Plant (WWTP)

##### Page 10

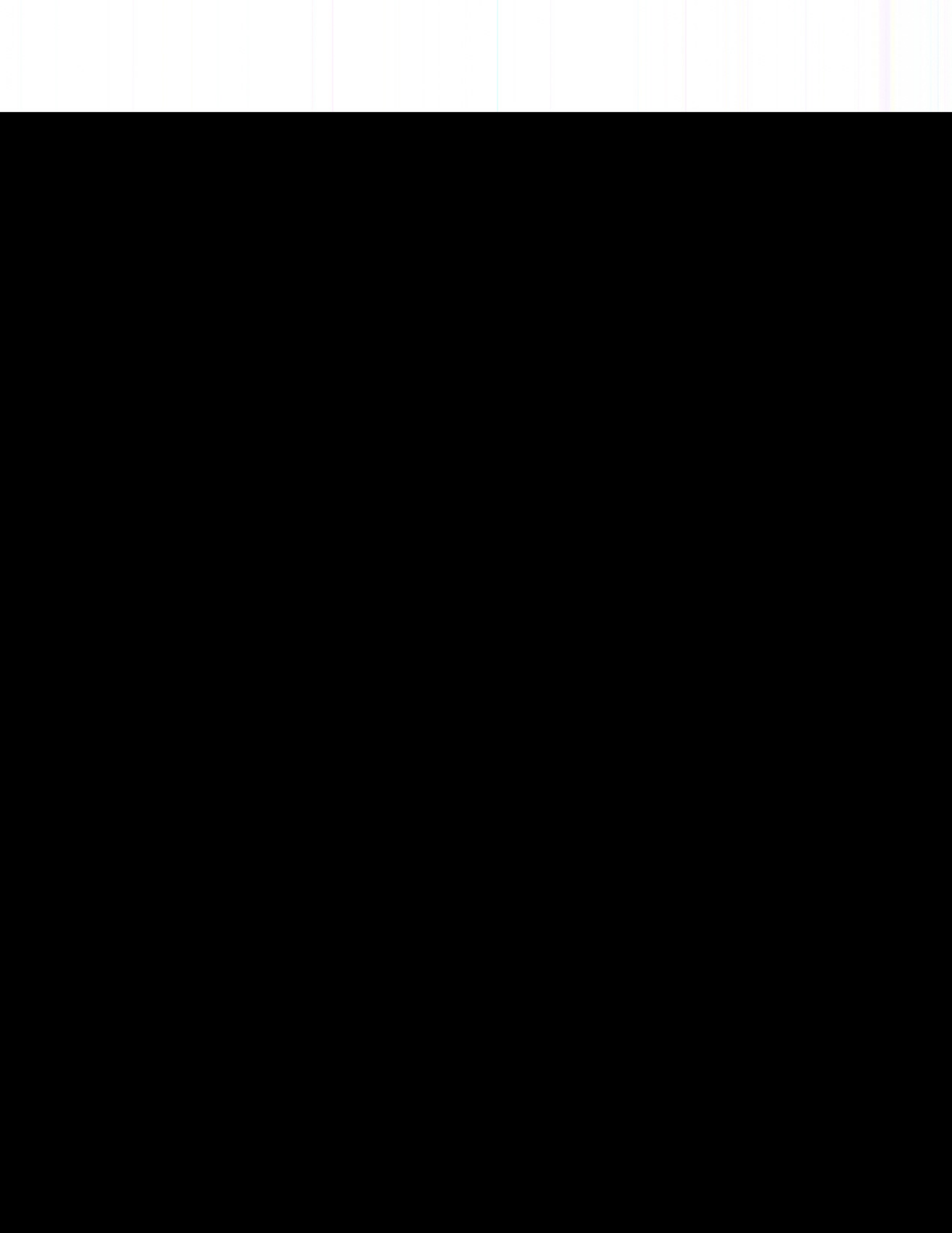
- 1) The latest implementation schedule for the WWTP will be provided to the NWB by November 30, 2004.
- 2) A copy of the 95% design for the WWTP will be submitted to the NWB by November 30, 2004.
- 3) The contingency plan if the timeline for commissioning the WWTP is not met will be to continue using the existing lagoon.

##### Page 11

- 1) The City will likely retain the sewage lagoon upon commissioning of the proposed WWTP. It will likely be partially decommissioned but left in place to be used should there be a catastrophic failure of the WWTP. A final decision on the fate of the lagoon has not been made. The City will notify the NWB of



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b. Solid Waste

i) Current Landfill

The City is attempting to retain a consultant to provide an updated Operations and Maintenance Plan for the Landfill including the eleven items requested by the NWB. The City anticipates having a consultant retained by January 2005. Once the City has retained a consultant we will be in a better position to provide a timeline for delivery of the requested information.

ii) Hazardous Waste

The information requested under Hazardous Waste will be included in the Operations and Maintenance Plan for the Landfill. As noted above the City will be in a position to provide a timeline for delivery of the requested information in January of 2005.

iii) Monitoring

The information requested with respect to any monitoring which has been performed at the landfill will be provided to the NWB by November 30, 2004.

The Operations and Maintenance manual will include the frequency, location, and parameters to be analyzed for a regular surface monitoring program at the landfill

iv) Other Existing or Abandoned Solid Waste Disposal Facilities

a. The existing landfill and possibly the North 40 metal dump are the only waste disposal sites the City is aware of having care and control. Other waste disposal sites are present in the City, as documented in our original submission, however to our knowledge they are not under the City's care and/or control.

b. The City is in the process of developing an Abandonment and Restoration plan for the North 40 metals dump. A copy of the proposed Table of Contents will be provided to the NWB by November 30, 2004. The final draft will be submitted to the NWB by December 30, 2004. The City is unaware of any Abandonment and Restoration Plans for other waste disposal sites in the City.

c. As noted in Section III.b.i of this letter, the City is attempting to retain a consultant to provide an updated Operations and Maintenance Plan for the Landfill. This will include the preparation of an Abandonment and Restoration Plan for the current waste disposal site. The City anticipates having a consultant retained by January 2005. Once the City has retained a consultant we will be in a better position to provide a timeline for delivery of the requested information.

The City appreciates this opportunity to respond to the questions and comments raised by the NWB. We appreciate the patience shown by the NWB while the City prepared this





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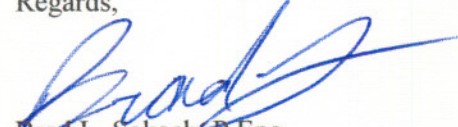
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response. Should you have any questions or comments, please do not hesitate to contact the undersigned.

Regards,

  
Brad L. Sokach, P.Eng.  
Director of Engineering  
City of Iqaluit

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