SUBJECT: U.S. Steel Canada-Hamilton Works Wastewater Treatment Project - Request for Compliance Agreement Extension - (PW09016) - (City Wide)

RECOMMENDATION:

(a) That the General Manager of Public Works be authorized and directed to negotiate an extension to U.S. Steel’s existing Compliance Agreement which currently ends on March 15, 2009 until no later than December 31, 2010;

(b) That the City of Hamilton, Compliance and Regulations staff monitor effluent and enforce Sewer Use By-law 04-150 if the conditions of the Compliance Agreement and Project proposal are not met by U.S. Steel Canada-Hamilton Works;

(c) That the City Solicitor and the General Manager of Public Works be authorized and directed to draft the Agreement for execution by the Mayor and City Clerk.

Gerry Davis, CMA
Acting General Manager
Public Works Department

EXECUTIVE SUMMARY:

Over the last three years the Compliance and Regulation Section of the Water and Wastewater Division have been working extremely hard, with the support of Council, towards tightening the regulations with respect to discharges going into the City’s sewer system. Staff have also enacted an Enhanced Enforcement Protocol which was
designed to get many long time dischargers into compliance within six months of entering a Compliance Agreement.

This process has been very successful and has seen numerous dischargers come into full compliance in the last 18 months. However, it has become evident that some companies would be unable to meet the City’s new tight timelines due to the extreme complexity of some of the projects required to bring the discharges into compliance.

The first such company to encounter this issue is U.S. Steel.

The purpose of this Report is to inform Council of a proposal from U.S. Steel to extend their Compliance Agreement from March 16, 2009 to December 31, 2010. U.S. Steel is in the process of designing, building, and commissioning a water treatment plant for their Coke Oven By-products Plant that will provide treatment of their wastewater to a level that will bring the discharge to the sanitary sewer system within compliance of the City of Hamilton’s Sewer Use By-law limits.

The goal of the extension is:

(a) To allow U.S. Steel to build and commission a $25 Million wastewater treatment plant that will enable them to comply with the Sewer Use By-law in its entirety once the plant is complete.

(b) To potentially eliminate their need for an Overstrength Discharge Agreement once the treatment plant is commissioned as a result of building a sustainable solution for their wastewater problems.

(c) To acknowledge U.S. Steel’s commitment to implement a sustainable solution to improve their environmental performance which is in their best interest and will help to minimize the environmental contaminants entering the Hamilton Harbour via the City’s infrastructure in the long term.

Staff have reviewed U.S. Steel's proposal and have had it peer reviewed by a third party independent consultant and both agree that the timelines suggested are still very aggressive but realistic.

The City could choose to proceed to charge U.S. Steel, if they do not meet their timeline of March 16, 2009, but this will not change the fact that the project cannot physically be built before December 31, 2010.

**BACKGROUND:**

The recommendations contained within this Report have City wide implications.

The City of Hamilton’s Sewer Use By-law 04-150 places limits on the concentrations of various parameters that are discharged to the sewer system. U.S. Steel Canada-Hamilton Works (formerly Hamilton Steel GP Inc., formerly Stelco Inc.) currently has two types of Sewer Discharge Agreements with the City of Hamilton for wastewater discharged from their By-products Plant.

1. An Overstrength Discharge Agreement enables the City to recover costs to treat certain parameters contained in the effluent currently discharged to the City’s sanitary sewer.
2. A Compliance Agreement which expires on March 15, 2009 was implemented to allow U.S. Steel to conduct phase 1 which included pilot testing and feasibility studies to determine treatment options available. Initial engineering designs as well as corporate approval to construct the wastewater treatment plant were also acquired during this period.

U.S. Steel is seeking approval for a Compliance Agreement to commence March 16, 2009 and expire December 31, 2010 in order to accommodate phase 2 of their plan and will include the following parameters: fluoride, cyanide, PAHs, phenols, pH and oil and grease (mineral). Their current Compliance Agreement includes the same parameters. It is important to note that the effluent quality has not and will likely not change during the construction of the water treatment plant. Therefore the wastewater we are accepting to the sanitary sewer will remain status quo and will have no negative impact on the Woodward Avenue Wastewater Treatment Plant provided the wastewater remains in compliance with the terms of the Agreement.

U.S. Steel presented Compliance and Regulations’ staff with phase 2 of their wastewater treatment plant project, and indicated that the facility would be completed and full compliance met by December 2010. R.E. Poisson Engineering was hired by the City to conduct a third party peer review on U.S. Steel’s proposal. The peer review results were positive and the consultant recommended that the City accept the plan proposed by U.S. Steel.

At the completion of this project U.S. Steel Canada-Hamilton Works will be in full compliance with the Sewer Use By-law 04-150, since they will be treating their own wastewater and discharging high quality effluent to the City’s infrastructure.

**ANALYSIS/RATIONALE:**

**Scope and Status of U. S. Steel Canada-Hamilton Works’ Wastewater Treatment Project**

**Current Situation**
- U.S. Steel currently has a Compliance Agreement with the City of Hamilton regarding sewer discharges that exceed by-law limits for certain parameters (i.e. cyanide, fluoride, pH, Oil and Grease, PAHs, and Phenols).
- This Agreement is set to expire March 15, 2009.
- Under this Agreement, and in working towards compliance, U.S. Steel had engineered and gained approval to construct a water treatment facility to pre-treat wastewater.
- The timeline to complete this facility extends to December 2010.

**Requested Action**
- As per Sewer Use By-law 04-150 and the policy of the Water and Wastewater Division, U.S. Steel requires an extension to the new Compliance Agreement with the City of Hamilton until December 31, 2010.
- Preliminary discussions with the Water and Wastewater Division have indicated that any extension would require approval from Council.
Benefits
- Completion of an appropriate water treatment facility would not only resolve the existing compliance issues with sewage discharge from U.S. Steel but would also lead to eliminating the need for an Overstrength Discharge Agreement.
- It will improve U.S. Steel’s environmental performance which is of interest to both U.S. Steel and the City of Hamilton.

Business Case
- **Performance Opportunity**
  - Present State: U.S. Steel is currently above the Sewer Use By-law limit for fluoride, cyanide and PAHs (whose levels have been tightened to 5 ppb), and occasionally for pH and Oil and Grease. The City of Hamilton’s recent decision to disallow phenol as an overstrength parameter will also place Hamilton Works above the By-law limits for phenol after 2009.
  - **Future State:** The By-products Plant’s effluent meets the requirements of the Sewer Use By-law.
- **Strategic Alignment**
  - The Compliance Agreement will support continued operations of the Hamilton Works’ Coke Ovens.
  - Part of Hamilton Works strategic investment program and process improvement to achieve and go beyond regulatory compliance.
- **Business Benefit**
  - Cost to produce home coke remains lower than the cost to purchase merchant coke.

**ALTERNATIVES FOR CONSIDERATION:**

Compliance and Regulations staff have identified two options available to the City of Hamilton for consideration. They are as follows:

Option 1: The “Do Nothing” Option. Leave the compliance end date, March 15, 2009 requiring the discharge from U.S. Steel to meet the Sewer Use By-law. This project will be in the preliminary engineering phase only and compliance will not be possible. Operation of the Coke Ovens and By-products Facility would cease. The impact of this would be substantial and result in the loss of approximately 200 jobs. There would also be a substantial impact on the competitiveness of their business. If U.S. Steel did not shut down they would be in a non-compliance situation and the City would be obligated to begin the process of charging them under the By-law.

Option 2: This is the option recommended by Compliance and Regulations staff. An extension to December 2010 will be given, allowing U.S Steel to proceed with commissioning a $25 Million wastewater treatment plant.
Financial/Staffing/Legal Implications:

Financial Implications:
There are no additional costs to the City to accommodate U.S. Steel’s request.
Annual revenue generated from the Overstrength Discharge agreement of approximately $200,000 per year will likely cease once full compliance is achieved.
The City of Hamilton will continue to accept wastewater containing non-treatable parameters above the Sewer Use By-law until U.S. Steel has their own treatment system commissioned. We currently accept this discharge without substantial negative impact to the City’s infrastructure or treatment plant.

Staffing Implications:
N/A

Legal
Enforcement activities may be necessary if terms of the Compliance Agreement or proposed project schedule are not adhered.

Policies Affecting Proposal:
The Sewer Use Enforcement protocol requires a company to meet target parameters within 6 to 9 months of entering a Compliance Agreement. Extensions beyond this require Council approval. Since 2007, 14 companies have entered into new compliance agreements and been given the standard timeline. U.S. Steel is the first company requesting Council approval for an extension, since their scope of work is extensive, and a substantial amount of capital dollars are involved.

Relevant Consultation:
R.E. Poisson Engineering Inc. reviewed the U.S. Steel waste water treatment plant proposal. They were asked to comment on project scope, feasibility, time lines, and sustainability. The following comments were made:

- A completion date of December 31, 2010 is aggressive, but appropriate. The proposed work plan to fully develop, construct, and commission is logical.
- The proposed treatment works encompass a range of technologies suitable for the treatment of parameters of concern and are appropriate for pre-treating discharges to a municipal sewer system.

City Strategic Commitment:
By evaluating the “Triple Bottom Line”, (community, environment, economic implications) we can make choices that create value across all three bottom lines, moving us closer to our vision for a sustainable community, and Provincial interests.

Community Well-Being is enhanced. ☑ Yes ☐ No
Higher quality wastewater discharges protect receiving waters for consumption and recreational purposes.
Environmental Well-Being is enhanced. ☑ Yes ☐ No
An increase in wastewater treatment capacity will assist in meeting Hamilton RAP targets and delisting Hamilton Harbour.

Economic Well-Being is enhanced. ☑ Yes ☐ No
Employment and business/industrial growth within the City of Hamilton is sustained.

Does the option you are recommending create value across all three bottom lines? ☑ Yes ☐ No
The option does create value across all three bottom lines as noted above.

Do the options you are recommending make Hamilton a City of choice for high performance public servants? ☑ Yes ☐ No
Staff have a sense of responsibility for industrial wastewater discharge and protection of the environment.