



April 4, 2016

Saskatchewan Ministry of Environment  
Attn: Brent Zelensky  
102 – 112 Research Drive  
Saskatoon, SK  
S7N 3R3

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Case: 2014-11-26T11:30:00

Re: Ministry of Environment Response to Application for Notice of Site Condition for the Imperial Oil Limited (Imperial) Site Located in Gravelbourg, SK (IOL Facility # 88006530)

Dear Mr. Zelensky,

In a letter from the Saskatchewan Ministry of Environment (Ministry) dated February 24, 2016, Imperial received a response to a Closure Report and Application for Notice of Site Condition that were submitted to the Ministry on November 6, 2016 by Kleinfelder Canada, Inc. (Kleinfelder). In this letter, the Ministry presented comments regarding perceived deficiencies in the application. A summary of the comments provided by the Ministry, and Kleinfelder's response, is as follows.

Regarding the Request for Acknowledgement of Closure

*The endpoints selected did not account for the more sensitive agricultural land use adjacent to the Site. In a letter to the Proponent from the Ministry, dated November 26, 2014, the Ministry included a condition to the 2013 Corrective Action Plan approval that stated, "The Proponent shall compare samples collected within 30 m of properties with more sensitive land-uses to guidelines applicable to the more sensitive land-use." This deficiency may affect the conclusions of the report, regarding samples collected from the north walls and bases of the excavations.*

- Per the attached survey plan of the site (Block A, Parcel Q, Plan No. 101122704) (Appendix A), north of the site lies Nicole Avenue, which has a width of 23.5 metres (m). Directly north of Nicole Avenue is an unnamed road, Registered Plan No. 65MJ13714. The width of this road right-of-way is 12.192 metres. Beyond the road is the agricultural land use. The distance from the north side of the site property boundary to the road is 35.7 m, which is greater than the required 30 m buffer for application of guidelines for more sensitive land-use.

*The Report did not address historical groundwater impacts at the Site.*

- Per the Ministry's November 26, 2014 request, Kleinfelder compared 2014 pre-remedial historical groundwater results to the 2014 Saskatchewan Environmental Quality Guidelines (SEQG) and summarized the findings in the cover letter of the November 6, 2015 submission. As noted in the 2015 letter, the results were reviewed and found that they were not above the current SEQGs.

*The risk(s) associated with the remaining on and off-site impacts at the Site have not been addressed or proposed to the Ministry in the form of follow up Corrective Action Plan(s).*

- Based on the information above regarding the lack of an agricultural buffer encroaching on the site, there are no remaining on-site impacts at the site that have not been addressed. A plan to address potential off-site impacts has been proposed to Canadian Pacific Railway (CPR) and Imperial is currently in negotiations to obtain access to complete an initial assessment. Imperial's request for closure is for on-site only at this time.

#### Regarding the Application for Notice of Site Condition (NoSC)

*The laboratory analytical results of soil and groundwater samples collected pursuant to the site assessment and corrective activities at the Site were not certified by Qualified Person(s).*

- The Saskatchewan Environmental Code (Code) came into effect on June 1, 2015. All samples in support of the NoSC work were obtained prior to May 6, 2015. As such, the laboratory that conducted the analysis did not issue Qualified Persons (QP) certificates for the work conducted. Imperial has informed Kleinfelder that Imperial's laboratory provider is working to include a QP certification in future lab reports that are to be used with the Notice of Site Condition (NoSC) process.

*The endpoints used for comparison of soil and groundwater analytical results during site assessment and corrective activities were not certified by Qualified Person(s).*

- The Saskatchewan Environmental Code came into effect on June 1, 2015. As field work was conducted prior to this, the QP certificate was not included in the application. However, as application was made after the Code was implemented, this form has been completed and included with this submission.

*The Potable Groundwater and Freshwater Aquatic Life pathways were eliminated pursuant to the outdated “Risk-Based Corrective Actions for Petroleum Hydrocarbon Impacted Sites” document (RBCA, 2009). Tier 2 pathway eliminations shall be justified in accordance with the applicable Saskatchewan Environmental Code chapters, standards, and guidance documents.*

- Upon submission of the Corrective Action Plan on December 3, 2013, the Ministry had accepted the Tier 2B pathway elimination under the 2009 RBCA guideline in a letter dated November 26, 2014. Said letter requested that the Imperial “shall compare results to the Ministry’s *Saskatchewan Environmental Quality Guidelines* (SEQG, 2014) in subsequent submissions.” All sampling endpoints were compared to the 2014 SEQG in the Remedial Excavation Report submitted in 2015. In addition, all samples in support of the NoSC work were obtained prior by May 6, 2015, prior to the code coming into effect.

*Soil samples were not collected and analyzed in accordance with the accepted methanol preservation techniques outlined in the Guidance Document: Impacted Sites.*

- All soil samples collected during remedial activities on the site were collected and analyzed in accordance with the accepted methanol preservation techniques outlined in the Guidance Document: Impacted Sites (as detailed on the laboratory Certificates of Analysis). All future submissions will clearly detail the sample collection method in the body of the report for clarity.

*The number of confirmatory samples collected from the extents of the excavations and imported backfill material were not statistically justified in accordance with the Guidance Document: Impacted Sites.*

- The Saskatchewan Environmental Code (Code) came into effect on June 1, 2015. All samples at this site during remediation work were obtained prior to May 6, 2015. As such, the statistical justification for samples was not conducted in accordance with the Guidance Document: Impacted Sites. However, Kleinfelder and Imperial take great care to ensure that a robust, defensible screening and sampling plan is in place during the excavation to target and sample worst-case locations.
- Each excavation was divided into a grid, with a maximum grid size of 5 m<sup>2</sup> for the walls, and 10 m<sup>2</sup> for the floor. Within each grid, samples were screened using field observations (staining and odour) and field vapour measurements. The wall profile is constructed using the aforementioned grid, and a diamond-shaped screening pattern is used to provide better areal coverage and to ensure horizontal seams of impacted soil will not be missed in the field screening process. Samples with the highest apparent concentrations of the contaminants of concern (“worst-case”), based on field screening and/or vapour readings,

were selected for laboratory analysis or removed from site. Confirmatory soil samples were discrete samples collected to represent the worst case soil conditions remaining at the excavation margins. Margin samples on the floor were submitted every 25 to 100 m<sup>2</sup>, while at least one wall sample was submitted from each wall profile spaced 2 to 5 m.

- Backfill sources for remedial excavations were sampled based on the volume of material required to be imported. At a minimum, two samples from the backfill source are collected and analyzed with additional samples being taken approximately every 500 m<sup>2</sup>. Samples are analyzed for a comprehensive suite of parameters including hydrocarbons, salinity parameters, metals, and semivolatile organics.

*The extents of the areas encompassed by the corrective activities were not surveyed by a Saskatchewan Land Surveyor.*

- Prior to initiating remedial activities on the site, the site boundary was surveyed and marked. Planned remedial excavation extents were measured from the surveyed boundaries, and final remedial excavation extents were confirmed in relation to the surveyed site boundaries. In Kleinfelder's professional opinion, there is reasonable certainty regarding the location of the remedial excavations on site, in particular with regard to the extents along property boundaries indicating that off-site impacts are present.

Given that the NoSC closure process came into effect after June 1, 2015 and the remedial work at the site was completed prior to that time, Kleinfelder is withdrawing the request for a NoSC on behalf of Imperial and requests that the Ministry provide written confirmation that the Corrective Action Plan was completed and no further remedial work is required onsite. Both Imperial and Kleinfelder will progress off-site access with CPR.

We trust that the information contained in this letter and the enclosed documents satisfy all of your requirements. If you require additional information or clarification, please do not hesitate to contact the undersigned at 587-962-4026 or [apocsik@kleinfelder.com](mailto:apocsik@kleinfelder.com).

Sincerely,

**Kleinfelder Canada, Inc.**



Amanda Pocsik, P.Ag.  
Project Manager



Blake Thompson  
Program Manager

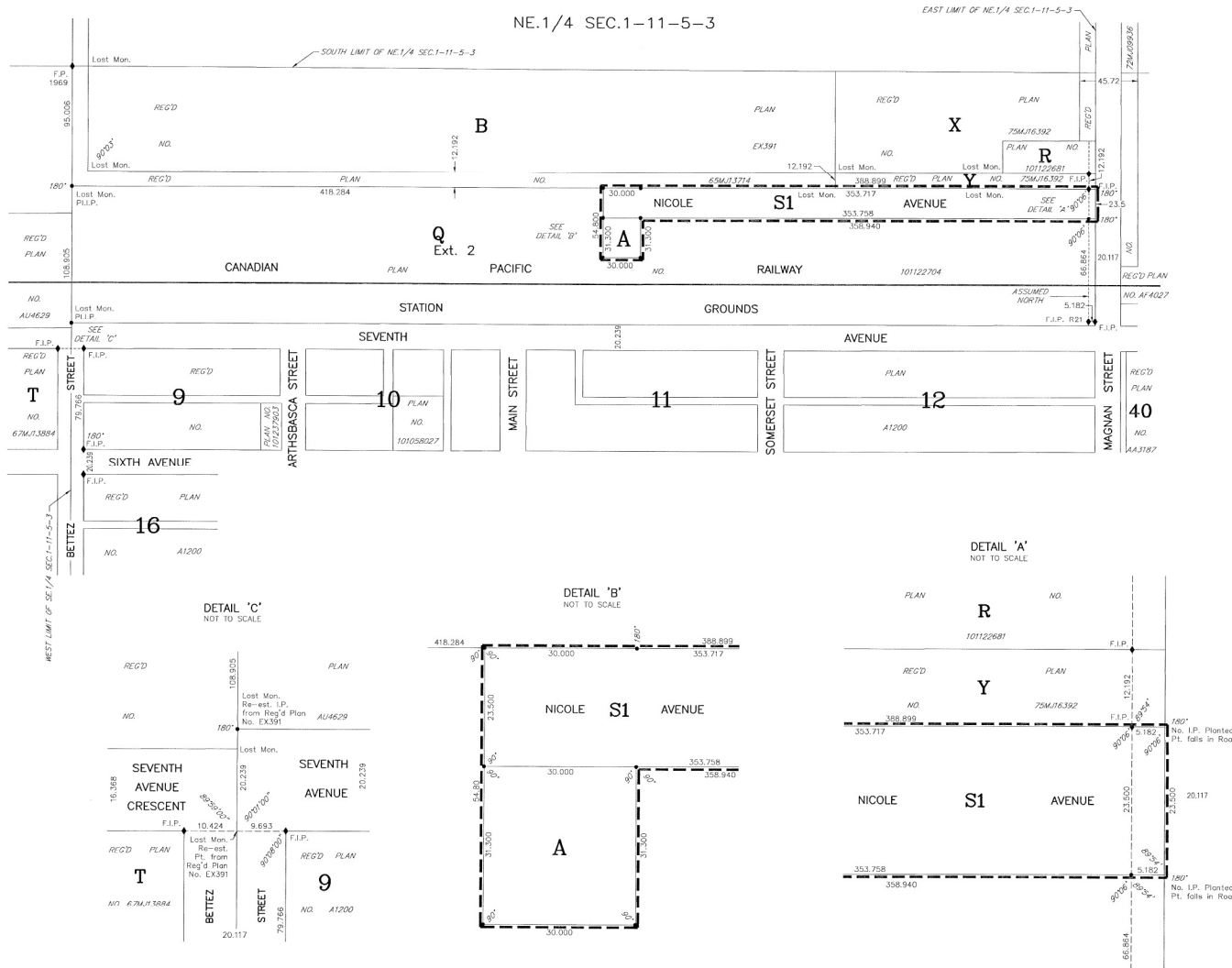
cc: Brennan Vervoort, Imperial Oil  
File

## **APPENDIX**

Appendix A Survey Plan - Block A, Parcel Q, Plan No. 101122704



**Survey Plan - Block A, Parcel Q, Plan No. 101122704**



PLAN OF SURVEY  
SHOWING SURFACE SUBDIVISION  
OF PART OF  
STATION GROUNDS  
PARCEL Q, PLAN NO. 101122704  
SE. 1/4 SECTION 1  
TWP.11 - RGE.5 - W.3Mer.  
GRAVELBOURG, SASKATCHEWAN  
E.H SEIS, S.L.S.  
MARCH, 1999 - APRIL, 2002  
SCALE: 1:2000

#### LEGEND

Measurements are in metres and decimals thereof.  
Area to be approved is outlined by a heavy dashed line.  
Monuments found are shown thus: ————  
Standard iron posts planted are shown thus: ————  
All parcels within the line of approval have an Extension 0.