

#27

SASKATCHEWAN ENVIRONMENT
Environmental Protection Branch
112 Research Drive
Saskatoon, Saskatchewan
S7K 2H6

October 16, 2008

ATTENTION: Mr. Ralf Bock

Fax: 1(306) 933-8442

Re: Former Regina Imperial Oil Refinery Property

Dear Mr. Bock.

In regard to the Phase II Environmental Site Assessment you initiated on the former Imperial Oil Refinery property, we submit the following Leader Post articles relevant to site history.

Firstly you will note the article dated March 21, 1979, where it is reported that the City purchased the refinery property expecting to bank it for the expansion of Ross Industrial Park by selling to private industries. It is interesting to factor that the City commissioned the first soil tests by Ground Engineering in 1980 and again in 1986 along with Beckie Engineering and contrary to the article...the City has not sold any of the referenced excess land north of the Bus Transit Facility, which remains undeveloped to this day. This suggests that certain elements, after the first soils tests in 1980, within the City have known at least since 1980 that the area is highly contaminated therefore making the sale of such excess land totally impossible.

It is important to consider that by 1986 the City had committed themselves to redevelopment projects on the former refinery complex. Therefore any open public knowledge regarding serious site contamination would have significantly affected their credibility.

Base on prima facia evidence it can be determined that the City has in affect turned a blind eye to the environmental issues of the area, in order to now protect Dairy Producer's creamery investment and the City's Transit Center investment in the respective area, to the health and safety detriment of other area property owners, residential and commercial.

Secondly, you will find article dated February 15, 1992, which is proof the City has used excess land north of the Bus Transit Facility as a dumping area for some 800 cubic yards of contaminated toxic herbicide. The article goes on to report that Mr. Gary Nieminen expected the waste to be moved because, "We don't need a factor that might turn a future buyer away from the site", which is a rather naive understanding of a former refinery site.

There is also mention on the October 10, 1980 deep well article under "Levels of Chemical in Treflan Restricted" that suggest contaminate found in herbicide could be

cancer-causing. The question is, is there a record of this contaminated material being moved?

Certainly awareness of this incident may be important in respect to certain associated contamination responsibility.

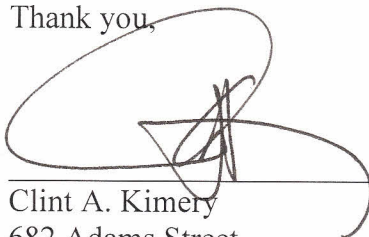
Thirdly, and most important, is the report regarding article dated October 10, 1980, which discloses the refinery was not only involved with deep disposal wells regarding cyanide and phenol, but was also dumping the cyanide and phenol wastes into open surface pits, and into the sewer system.

Lastly we note in the 1981 MLM Ground-Water Engineering report at page 32 where it states the Imperial Oil Refinery's deep disposal well discharged into the "Blairmore Formation" and was supposed to have been grouted to surface, however in the October 10, 1980 article it notes the discharge well injected waste into the Souris Valley formation.

Regardless, the outstanding questions are...how many reservoir pits were used on the property, where were these pits located, and where is the location of the disposal well? There is also a question regarding any records as to how or if the deep injection well was ever sealed?

Given the attachments, would you would kindly provide advisement on the Phase II status and schedule.

Thank you,

A handwritten signature in black ink, appearing to read 'Clint A. Kimery', is written over a horizontal line. The signature is stylized and somewhat abstract.

Clint A. Kimery
682 Adams Street
Regina, Saskatchewan
S4N6R8
1(306) 775-2626

MAR 21/79 PG. 3

By Daphne Bramham of The Leader-Post Dewdney Avenue widening was once again an issue at city council meeting Tuesday evening.

The North Central Community Society presented a letter clarifying its position regarding widening of any portion of the avenue.

The works and utilities committee in early February and a subsequent council meeting agreed to ask the local government board to permit the sale of developments to widen the Albert Street-to-Garnet Street portion of Dewdney Avenue without submitting the question to burgesses for approval.

The move is an attempt to get some work done on the avenue in spite of the fact burgesses turned it down in last year's vote.

Ron Thompson executive secretary of the society, told council it would not support any widening of Dewdney unless a suitable agreement could be reached concerning the remaining portion of the avenue.

He said the group is in favor of the placement of sidewalks and curbs as well as upgrading the existing roadway.

However, he added it would not be in favor of putting sidewalks between the trees and the houses as the city's public works and engineering department has suggested.

When questioned by aldermen, Thompson said residents are not concerned Dewdney Avenue must be the alternative route to the east-west traffic arterial.

He said residents are not concerned there is a need for Dewdney to be approximately the same width as Albert Street in the downtown area.

Dave Schell, assistant director of public works and engineering, said after the meeting the major difference between the department and the residents

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is the placement of sidewalks. He said the community understands that ultimately the remainder of the street from Garnet west will have to be upgraded.

One of the problems, according to Schell, is that residents see the avenue as an expressway while the city views it as a major arterial.

Whether the residents and the city see upgrading as the same thing is the other major problem.

Residents would be content to have simply that the existing roadway in place, the sidewalks and curbs re-

The city, however, believes an alternative route to the east-west arterial is needed and Dewdney Avenue is that alternative. But Dewdney must be widened to serve as a major arterial street.

Schell said the east-west arterial which will extend from the Lewvan Expressway in the west, down South Railway Street to 10th Avenue and from there to Arcola Avenue and the south-

ern portion of the avenue. He said the group is in favor of the placement of sidewalks and curbs as well as upgrading the existing roadway.

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the widening of that portion. Thompson said he had not been in touch with the business people and the letter sent to council was the result of a meeting of the community group's executive.

Businessmen resigned He said the business community seems resigned to the fact that the only way to get sidewalks and parking in front of their businesses is to approve the widening.

Thompson suggested the city put parking restrictions along Dewdney Avenue to discourage people from doing business there, and pressure the business into agreeing to the widening.

The matter was referred to the manager with no recommendation as to what he should do with it.

Assistant City Manager Peter Philip said the city had no objection from the local government board whether the venture sales would be approved.

McDonald Street, 1st Avenue and in Ring Road. This parcel is 29 acres in total.

The land borders on Phase 2 of the industrial park, which has already been subdivided and is fully occupied.

It is expected all of the land purchased by the city will be needed for expansion of Ross Industrial Park and sold to Dairy Producers Co-operative.

The park, as of Dec. 31, 1978, had a net saleable acreage of 1,162.9 acres while 608.5 acres of land has been sold. The gross acreage of the park at the end of 1978 was 1,327.2 acres.

operation of the city dog pound. Ald. Tim Embury said following the meeting that if the ATCS policy committee's recommendation is approved during budget estimates, the money given to arts groups would be taken out of the per-capita fund rather than the grant fund which is set by the local government board at a maximum of one-half mill per year or approximately \$150,000.

City plans to buy Imperial Oil site

Approval of a confidential report from the city solicitor by city council, authorized the purchase of property from Imperial Oil Ltd. for a total price of \$2.4 million.

Of the 111.76 acres of land in the Ross Industrial Park area, 53.24 acres will be turned over to the Dairy Producers Co-operative.

For the remaining 58.52 acres, the city has agreed to pay no more than \$1.2 million.

Although council approved the purchase of the land Tuesday evening after discussing it briefly in camera, the sale

the city should seek alternate funds. Riel, specifically is sold out all summer and Boyle said the committee only needs to raise ticket prices to make money.

Grants making up the \$350,000 included \$16,500 to the Family Service Bureau, \$15,000 to the Regina Race Relations Committee, \$9,100 to the Rosemont Art Gallery, \$9,000 to the Senior

Grants approved despite protests

City council approved grants of more than \$59,000 Tuesday evening despite protests from two aldermen.

Ald. Nick Iamone (Div. 1) and Ald. Mickey Boyle (Div. 7) opposed the grants on the basis that the city gives away too much money.

Iamone moved the grants be looked at again by the personnel and finance com-

No decision on treatment plant

MOOSE JAW (Staff) — City Council held a three-hour meeting Tuesday night to discuss sewage disposal methods but the session ended with no decision on a proposed treatment plant.

The question was tabled after Baldon area farmers asked the city to install an effluent irrigation facility.

process in the fol-

Value of monitoring wells questioned

By Peter von Stackelberg

Tests on the well, including pressure logging and taking samples of water from the well and from shallow wells in the area, said the pressure logging will not act as a route for carrying wastes upward and leaking it into shallow ground water. The well is being used to monitor the migration of the injection tube in the well had served a leak, but the outer casing of the well would prevent migration of the wastes, he said. Gillard was critical of the Leader-Post for the stories it carried on the disposal of mercury-contaminated bromine wastes in Saskatchewan.

The Saskatchewan chemical plant, owned by Prince Albert Pulp, the wastes were put into a saltwater bed about 1,800 feet underground.

Monitoring important

"It is important to monitor deep-well disposal operations by means of observation wells drilled to the disposal zone, so that necessary steps may be taken to prevent migration of hazardous waste," the report said.

Douglas Gillard, director of the petroleum and natural gas division of the Saskatchewan Energy and Mines department, said there has not yet been a decision on whether observation wells would be drilled around the Saskatchewan disposal site.

"I do not acknowledge monitoring wells," said a Saskatchewan government official, a letter of protest that they have a row of where the wastes are.

"I am not sure whether that would be a better or worse idea," he said.

Gillard said if there were fissures in the disposal zone, the wastes would not leak out, but they would not give a true picture of the situation.

Alison Sorensen, of the mineral resources division, said the wastes would be contained in a minimum of 300 feet of sandstone, which would be a natural barrier to migration.

"The area is not a disposal area, it is a storage area," he said.

Gillard said however the nature of the wastes were injected could mean the wastes would move even further. He said the sandstone bed, in which large amounts of brine are trapped, could have different layers with different permeability.

In those layers where the permeability is low, the wastes would be much more contained. In those layers with high permeability the wastes could travel beyond the 300 feet.

The mineral resources and environment department announced yesterday they would carry out a number of

led. He said monitoring ensured the wastes were injected into the Blairmore disposal well and not into other formations.

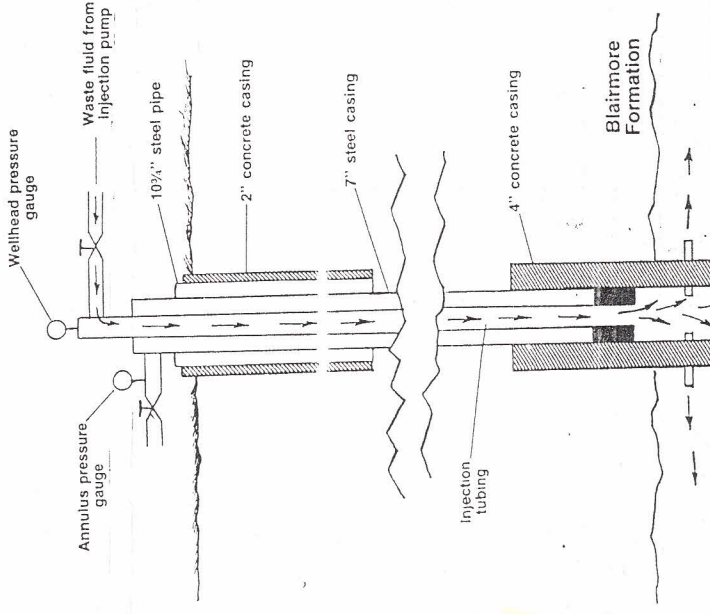
But the two reports, prepared in 1972 and 1973, on the deep disposal wells in Saskatchewan, said that the monitoring was in error in migration of the disposal place.

Don Poy, with the water quality branch of the Saskatchewan Environment, said Thursday some confusion has arisen on the question of monitoring. He said while monitoring of wastes injected into the disposal well is important, but the 1972 report said that the monitoring of the movement of the 2,410 wastes had taken place after 1970.

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Toxic wastes pumped down well in Regina

Huge quantities of refinery wastes containing cyanide were pumped down a well in Regina from the Imperial Oil Refinery. Concentrations of those toxic chemicals were much lower in the disposal well than in the refinery.

Information on the chemicals pumped down the Consumers' Co-op well was not included in the report. Douglas Gillard of the Saskatchewan Environment Department said there was no indication of Consumers' Co-op injecting cyanide with its wastes, but otherwise he believed the same as these fluids have basically the same composition.

The Imperial well was 3,500 feet and injected wastes into a geological formation known as the South Valley formation. The wastes were pumped down the well 80 feet to 2,500 feet into the Blairmore formation.

Gillard said there is no evidence of oil or gas migration from the well and that the well is not a disposal well. He also noted the use of disposal wells was a considerable improvement over the surface pits, and the rest of the wastes went in to sewer system. The well was built in 1970 and it was installed before.

Approximately 125 million gallons of wastes, primarily sour water and spent caustic, were pumped down two wells between 1962 and 1975. The Imperial Oil well was abandoned and cemented shut in 1972 and the Consumers' Co-op well is still being used.

The concentrations of cyanide in the spent caustic from the Imperial Oil well were about 100 parts per million, but the 1972 report said that the highly poisonous chemical, were about

Third Page

Levels of chemical in Treflan restricted

Restrictions on a cancer-causing contaminant in the herbicide Treflan were set by the U.S. Environmental Protection Agency (EPA) at the beginning of October.

The agency has limited levels of the chemical NDPA in less than one part per million because of the health hazards it poses. The restrictions are in effect for Treflan. In addition to causing cancer it can cause genetic damage and other health problems.

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Station off air

Radio station CFM-FM was off the air for more than an hour Thursday because of a power outage during the transmission of a transmitter test.

Kevin Large, assistant station engineer, said the pole looked like it was bent. The station went off the air because of a power outage during the transmission of a transmitter test.

FERNSTATION

6.3.6 Co-op Refineries

The Co-op Refinery has been in operation for more than 30 years. It is located in a Fairly Sensitive part of the area (Sec. 5 - Tp. 18 - Rge. 19 - W2M). Relatively thick Regina Clay, Condie Silt and clayey Till overlie the Regina Aquifer and provide reasonably good protection from surface spills. Old wells and inadequately sealed test holes that provide direct conduits into the aquifer itself are the only likely means by which aquifer contamination would occur in this area. A deep disposal well that penetrates the aquifer and injects into the Blairmore formation exists on the property but its operation is carefully monitored for leakage. The closest City production well is R5. Its proximity to the abandoned Mt. Pleasant Landfill probably poses a more serious threat than the operations at the Co-op refinery. However, a monitoring system should be installed to verify the hydrologic conditions at the refinery.

6.3.7 Imperial Oil Refineries

Imperial Oil operated a refinery in northeast Regina (Sec. 32 - Tp. 17 - Rge. 19 - W2M) for more than 60 years. It ceased operations in 1975. It too is located in an area designated as Fairly Sensitive. The thick Regina Clay, Condie Silt and clayey Till overlying the Regina Aquifer have afforded good protection from innumerable unrecorded hydrocarbon spills throughout the refinery with no adverse effects on the quality of water pumped from the aquifer through either its own wells or other large production wells in the City. Pumping tests in 1980 on two of Imperial Oil's former production wells did not detect the presence of any hydrocarbons at all in the water. Excavation for foundation piles at the Dairy Producers Co-operative Ltd. site near the southern end of the old refinery revealed that the Condie Silt and the top of the underlying clay till served as an effective barrier to the downward migration of hydrocarbons from old spills. At the present time several abandoned water wells on the site can serve as conduits for contaminant migration. They should be properly abandoned by grout sealing. A deep disposal well completed in the Blairmore formation also existed on this site. This well was supposed to have been grouted to surface upon abandonment and

should not pose a threat to the aquifer. Extreme caution to ensure tight casing seals and proper abandonment should be taken with future wells or testholes drilled on this property. A ground-water monitoring system should also be installed here especially if producing water wells are to be located on the property.

6.3.8 Federal Pioneer Limited

In 1976 a major spill of polychlorinated biphenyls (PCB's) occurred at the Federal Pioneer plant in the north central part of the City. A detailed investigation was conducted by Roberts et al (1980). As a result of their findings extensive remedial action was undertaken in the fall of 1980. This consisted of encapsulating the spill by a bentonite slurry wall on all sides, an asphalt pavement on the surface and the Condie Silt on the bottom. The presence of the Condie Silt, the thick underlying clayey till and the hydrologically confined nature of the aquifer at this site place it in the Fairly Sensitive category. In this category the underlying aquifer is reasonably well protected from activities on the surface unless poorly abandoned wells and testholes are present which can act as conduits for contaminant migration directly into the aquifer. Thus although the containment facilities currently being installed by Federal Pioneer Ltd. will ensure that no further downward migration occurs it is doubtful that any PCB's would ever have entered the Regina Aquifer under the existing natural conditions. An ongoing ground-water monitoring program should be conducted at the site to verify the position of the contaminant plume periodically.

6.3.9 Pilot Butte Gravel Operations

Extensive gravel pit operations are conducted southeast and northwest of the Town of Pilot Butte (Figure 16). These activities are carried on in an area designated Extremely Sensitive and consist primarily of physically removing part of the Avonhurst aquifer. The hydrologic significance of this is not fully appreciated. It could lead to a serious decrease in recharge rates and hence safe production rates. As far as pollution potential is concerned the active operation of the pits probably poses less threat of aquifer contamination than does