APPLICATION FOR PIPELINE ABANDONMENT

PART 1

Applicant

1. Owner of pipeline facilities: White Pass Transportation Limited

2. Business Address: Box 4070, Whitehorse, Yukon Y1A 3T1

3. Telephone: 403-633-7780

4. Contact Name: Marvin P. Taylor, President and Chief Operating Officer

5. Jurisdiction of Incorporation: British Columbia

6. Head Office Address: Russel Metals Inc.
Suite 210 - 1900 Minnesota Court
Mississauga, Ontario L5N 3C9

Part 2

Facilities to be Abandoned

7. Describe facilities to be abandoned: Whitehorse tank farm and piping; 24 tanks; 90 miles of four inch pipe.

8. Reason for proposed abandonment: Alaska State and Federal bureaucratic regulations

9. Date of discontinuance of service: October 1994

10. Alternatives to service provided by these facilities and effect of abandonment on public: Trucking now in place. Ten other competitors in the Yukon

Part 3

Proposed Abandonment Procedure

11. Describe proposed Abandonment procedure for each component of the facilities:

A. Pipeline Now deactivated and sealed. Will remove when economically feasible.

B. Upper tank farm at Whitehorse. Will scrap out tanks when economically feasible.

C. Pump station at Carcross Tank will be scrapped in conjunction with Whitehorse tank farm. We may have an aboriginal problem as well as their land claims.

12. Schedule for proposed abandonment procedure: When economically feasible.

Part 4
Environmental Matters

13. Describe the methods to be used for site assessment: Will comply with N.E.B. guidelines.

14. Describe the methods to be used for the cleanup of any contaminants: Practical approach based on past experience.

15. Describe the methods to be used for the salvage or disposal of pipe, tank components, equipment, scrap, debris, wastes and remaining product contained in the line, including specific disposal sites: Any product will be recovered. Don't expect any. All material to be as scrap except pipe.

16. Describe the methods to be used to restore the land: Above ground line.

Part 5
Financial Matters

17. Provide an estimate of the gross cost of the above-described abandonment: $1,000,000.

18. Statement on the means by which the above-described abandonment will be financed: By White Pass Transportation Limited

DATED the 12 day of JULY, 1995.

YUKON PIPELINES LIMITED

By: _____
Marvin P. Taylor

Title: President and C.O.O.

Report on an Inspection of the Deactivated Skagway, Alaska to Whitehorse, Yukon Petroleum Products Pipeline

National Energy Board
June 1995

Summary

This report was prepared by NEB staff from information gathered from 23 to 26 May 1996 during meetings with officials of Yukon Pipelines Limited ("YPL" or "the Company") and White Pass Transportation Ltd. and an inspection of the federally-regulated pipeline facilities. This visit was undertaken to assist the Board in deciding how to proceed in response to correspondence from YPL indicating its intention to deactivate the pipeline.

YPL is now in the process of removing petroleum products from its pipeline using an air-driven pig. The Company currently intends to remove the pipeline, clean and dismantle the storage tanks and dispose of the materials as scrap. In order to ensure that all petroleum is removed from the pipeline, tapping, under controlled conditions, of low lying sections of the pipeline, will be required.

The inspection of the upper tank farm in Whitehorse and accessible portions of the pipeline right-of-way, revealed evidence of soil contamination at the tank farm and at two of six previous spill sites. The tank farm is located on a 52 hectares site which will require a detailed assessment. Testing for contamination along the right-of-way is recommended at sites where evidence of contamination exists and of particular concern are the levels of lead where gasoline containing lead was spilled. Removal of the remnants of facilities, scrap pipe and components and debris is required at the site of the former pump station at Carcross.

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1.0 Introduction

The Yukon pipeline has been operating since 1962 under the regulation of the National Energy Board ("NEB" or "Board") as a refined products pipeline; transporting gasoline, diesel and fuel oil, from a point on the international boundary between Alaska and British Columbia near Fraser, B.C., to the city of Whitehorse, Yukon.

On 7 October 1994, Yukon Pipelines Limited ("YPL" or "the Company") deactivated the Yukon pipeline. The pipeline was left full of fuel oil over the winter months of the latter part of 1994 and the first part of 1995. In March 1995, YPL stated that when conditions permit, the fuel oil will be removed from the pipeline in preparation for final abandonment of the pipeline. In May 1995, the NEB inspected the pipeline, pursuant to its mandate under section 49 of the NEB Act. The inspection involved discussions with YPL representatives and preliminary site assessments of the pipeline and right-of-way, the upper tank farm in Whitehorse and the site of the Carcross pump station.

This report, prepared for the members of the NEB by NEB staff, presents results and conclusions drawn from discussions with YPL as well as the inspection of the pipeline and associated facilities.

2.0 Background

The Yukon pipeline, as it exists today, consists of a 144 km long, 114.3 mm diameter pipeline from a point on the Alaska - British Columbia border to Whitehorse and a tank farm in Whitehorse, referred to as the Upper Tank Farm. Figure 2.1 illustrates the Yukon pipeline.

The Yukon pipeline was built, essentially as a strategic move, in 1942 by the U.S. army along the railway right-of-way of the White Pass and Yukon Route. The pipeline was simply welded together and placed on the ground surface next to the railroad tracks. Following the war the pipeline was unused and largely forgotten about until White Pass purchased it and the tank farms in Whitehorse and Skagway. In 1962, with the issuance of Certificate of Public Convenience and Necessity, OC-12, YPL was granted Board approval to operate the pipeline to transport petroleum products from the point of connection on the international boundary with the Alaskan portion of the pipeline to Whitehorse. Until 7 October 1994 the pipeline was operated in this manner.

YPL is owned by White Pass which is also the distributor of approximately 50% of the petroleum products used in the Yukon. White Pass was the sole shipper on YPL and it would appear that access to the pipeline was effectively restricted through White Pass' ownership of the upstream dock facilities in Skagway, Alaska. White Pass is in turn owned by Federal Industries Ltd., a publicly-traded corporation with headquarters in Winnipeg.

YPL stated that deactivation of the pipeline at this time has been prompted by actions of U.S. authorities. In any event, with existing volumes, the costs of operating the pipeline are now about the same as trucking from Skagway. At the same time that the pipeline is being deactivated, White Pass' product distribution operation is also being sold to undisclosed interests. It is possible that deactivation of the pipeline is linked to this sale, however, it is evident that YPL has no interest in selling the pipeline as a going concern.

3.0 Inspection Results

3.1 Pipeline Pigging Program

In May 1995, YPL began pigging the pipeline to remove the estimated 1.1 million litres of diesel and fuel oil remaining in the pipeline. The pipeline line fill, valued at $0.5 million, is owned by YPL. The pipeline is to be pigged in two stages the first being from the highest point on the pipeline at Milepost ("mp") 33.0 to mp 0.0 in Skagway. The second stage being from mp 33.0 to mp 110.0 at the upper tank farm in Whitehorse. The pigging program is being carried out by a contractor from Anchorage, Alaska and consists of a single pig run using a squeegee type tracking pig propelled by compressed air. Recovered product is stored in tankage at Skagway and gauged to determine the volume recovered. For the second stage, product will be recovered and gauged at the upper tank farm.

The first stage of the pigging program was underway at the time of the inspection (see photographs). According to YPL personnel, the pig was launched with about 600 kpa and was moving steadily with about 300 kpa air pressure behind it. After 20 hours, the pig had travelled to about mp 14, well onto the Alaska portion of the pipeline (i.e. mp 0.0 - 20.7), and an estimated 11,000 litres was recovered. The compressor and pig launching arrangement are shown in the attached photographs (see Photographs 3.1a and 3.1b).

The pigging operation is monitored continuously and where possible tank trucks will remove product from the pipeline as pigging proceeds. As a safety precaution pigging is conducted in the evening to ensure that traffic on the railroad is not disrupted and as few people as possible are in the vicinity of the pipeline when the pigging operation is underway. A single pig run is planned, however, the need for additional pig runs will be determined upon completion of the pigging program and a comparison of the recovered volume to the volume estimated to have been in the pipeline.

According to YPL the pipeline has only transported clean refined products and that the inside walls will be adequately clean following pigging. It was observed at mp 33 that the inside surface of the pipe is smooth and free of oxides (see Photograph 3.2).

3.2 Pipeline and Right-of-Way

Inspection of the pipeline in the City of Whitehorse and along the Alaska Highway revealed several locations where the pipeline is buried beneath the highway itself and developed roads intersecting the pipeline. Between Whitehorse and Carcross the pipeline is buried beneath several improved and unimproved roads. Through Carcross much of the pipeline passes beneath a road and a parking lot near the town centre. Immediately south of the town the pipeline is suspended from a railway bridge across the Nares River. At about mp 32.8 the pipeline passes beneath the S. Klondike Highway. A typical arrangement for supporting the pipeline across a creek was observed at Kilometre post ("kmp") 1470 of the Alaska Highway (see Photograph 3.3).

Based on Board records, there have been 57 incidents since 1966 which have resulted in the discharge of hydrocarbons from YPL's pipeline. YPL has not reported any incidents since September 1987. No leaks have been reported by YPL since the deactivation of the pipeline. At mp 33 and at the upper tank farm in Whitehorse, it was observed that no pressure existed in the pipeline. Some staining on the pipe and the ground was observed at a flange connection on the valve at Alaska Highway kmp 1478, located immediately upstream of the upper tank farm (see Photograph 3.4). With respect to previous spill sites along the pipeline, YPL indicated that the sites have been remediated. YPL indicated that, at the majority of the spills, the product was burned off. YPL stated that the sites were checked in subsequent years. YPL further stated that it is not aware of any existing contamination along the pipeline.

Due to the length of the pipeline, staff focussed its observations to areas of previous spills, based on the incident reports on file with the Board. Observations were made at kmp 1469 of the Alaska Highway, and mp 90.1, 29.9, 24.5, 24.1, and 23. Other sites where relatively large spills occurred in the past were not accessible. Only one of the visited sites, mp 90.1, where a spill of 78,000 litres (489 barrels) of gasoline occurred in 1985, showed visible signs of soil contamination (see Photographs 3.5a and 3.5b). The gasoline appeared to have pooled in two relatively small areas where the vegetation is now sparse or dead. A slight hydrocarbon odour still persists in the soil of one of the areas. A small area near mp 29.9 had a faint odour of hydrocarbons in the soil (see Photograph 3.6). Due to the rocky area, it was difficult to determine whether vegetation growth is still being affected by the contamination at mp 29.9.

Signs of herbicide use were present along some of the pipeline route, specifically adjacent to the railroad corridor where the railway was still in use. YPL indicated that the herbicide "Round-up" has been used for the past eight or nine years and that B.C. regulations with respect to the use of herbicides have been followed. In terms of buried facilities along the pipeline, YPL stated that none existed and that an anode bed installed near mp 21 was removed previously. YPL indicated that it is not aware of any landfill sites at its facilities and that it is not aware of any public concerns associated with its facilities.

3.3 Upper Tank Farm

YPL owns the land associated with the upper tank farm which is located within the City of Whitehorse. This land comprises 52.5 hectares (130 acres) of prime real estate in Whitehorse with valuable sand and gravel deposits. The land value alone is estimated to be well in excess of $1 million. It is noteworthy that the only other professional employee being retained by YPL following closing of the sale of the petroleum distribution operation, is a real estate manager. YPL declined to comment on its plans with respect to its landholdings. The Company indicated that its plant accounting records are available for examination.

The tank farm site is located on high ground and the surface and subsurface material consists of mainly sand and gravel. The area is very well drained and no evidence of standing water was found. The area is generally forested, except where cleared for the tanks, buildings, roads, loading area and other facilities. The vegetation is mainly pine, poplar, Labrador tea and bearberry.

The layout of the 24 tanks at the upper tank farm is illustrated in Figure 3.1. At the time of the inspection, eight tanks were in use. These tanks are shown in Figure 3.1. Tank 123, containing fuel oil, will be used to store the fuel oil pigged from the pipeline. Other facilities at the upper tank farm include an inlet meter, densitometer, truck loading and unloading racks, booster pumps, yard piping varying in diameter from 114.3 mm to 219.1 mm and valves on the yard piping. There are also two buildings at the upper tank farm; one housing the meter and the other serving as an office for the operator. Various storage areas exist throughout the tank farm, including a site near the meter building where a number of barrels are stored. The barrels are identified as containing methanol and engine coolant. YPL stated that there are no underground tanks or buried facilities at the tank farm. YPL further stated that there are no chemicals stored on site. With respect to the existence of any soil contamination at the tank farm, YPL indicated that it was not aware of any soil contamination and that no major spills have occurred at the tank farm. YPL indicated that it did not intend to commission environmental site assessments or audits on any of its facilities.

A number of areas of soil staining was observed within the tank farm. This mainly included areas around the meter building (see Photographs 3.7a and 3.7b), the truck loading area (see Photographs 3.8a and 3.8b), a number of the tanks, some of the valve locations, and the barrel storage area. The most severe soil staining was observed at the truck loading area. With respect to the truck loading

area, very prominent soil staining around the numerous valves was noted. Soil staining and a strong hydrocarbon smell were noted, along with dead vegetation, in a depressional area adjacent to the truck loading area (see Photograph 3.9).

At several tanks, it was evident that fuel was leaking from the vertical seams in the walls of the tanks. This was most evident in tanks 123 and 124. At these tanks it was evident that this type of leakage may have occurred over a long period as the original yellow sealant on the wall seams was washed away completely (see Photographs 3.10a and 3.10b). The severity of soil staining varied at the tank sites. Tank 118, at one time designated for fuel oil, was not in use and soil staining was not observed. Tank 122 had some soil staining at the base of the tank and had very noticeable soil staining at a valve connection in the vicinity of the tank (see Photographs 3.11a and 3.11b). Tanks 123 and 124, tank 124 being empty but having contained fuel oil at one time, had more severe soil staining around their bases with the most severe staining at the valve connections into the tank (see Photographs 3.12a, 3.12b and 3.12c). These two tanks had the most prominent soil staining of the tanks that were inspected. Tank 101, marked as a gasoline tank, was not in use and very little staining was observed. Several tanks had been refurbished, which included painting the outside surface and in at least one case applying a resin to the inside surface to seal leaks. Tank 113 had been sealed with resin and no evidence of leakage existed at this tank. It was full of gasoline at the time of the inspection.

Most of the tanks not in use had been cleaned. The cleaning procedure involves squeegeeing petroleum from the wall and floor of each tank and leaving the tank open to atmosphere to air out. Screens are installed over the tank openings to prevent unauthorized entry. Signs are also posted indicating that a breathing apparatus is required inside the tank.

Signs of herbicide use were present, as well as mechanical removal of vegetation, at the tank farm. The use of the herbicides appears to have been limited to the areas around the tanks up to and including the tank berms (see Photograph 3.13).

The perimeter of the tank farm is fenced with a modern chain link fence complete with a barbed wire skirt at the top and lockable gates. When the tank farm is not attended the gates are locked and a guard dog is turned loose inside the fence.

In 1990, the Yukon Territorial Government ("YTG") drilled a well near the northwest corner of the upper tank farm to determine the water bearing potential of an aquifer underlying the tank farm. The well, which was cased and capped, was drilled by the YTG in relation to a propose subdivision adjacent to the tank farm.

3.4 Carcross Pump Station Site

The site of the Carcross pump station is located adjacent to the pipeline about a half a kilometre north of the town of Carcross. The pump station is situated within a rolling sandy area, with clusters of pine and poplars. The area appears to be very well drained. Facilities at the site include a tank, yard piping, concrete foundations and flooring and loose pipe and pipeline components (see Photographs 3.14 and 3.15). The tank, which is located on relatively high ground in comparison to the other facilities at the site, is empty and open to the atmosphere and disconnected from the yard piping. The ladder to the top of the tank has been removed and the manways are blocked to prevent unauthorized entry. There are also some old barrels and other refuse located approximately 30 m from the pump station site (see Photograph 3.16).

The site is not fenced and has been used by the public for servicing vehicles and as a recreational site (see Photographs 3.17 and 3.18). Numerous empty motor oil containers and some fresh soil staining were found near concrete building foundations containing a derelict mechanics pit (see Photographs

3.19 and 3.20). Ownership of the site is not clear, however, YPL assumed that it owns the site. YPL also indicated that no underground tanks exist at the pump station, and no chemicals have been stored at the site.

The Carcross station was never been used by YPL as a pump station although there is evidence that the tank contained petroleum at one time and that petroleum currently exists in some of the yard piping. Two small areas of soil staining were present; each occurred around a pipe end that had been cut at the ground surface (see Photograph 3.21). There were two other pipes coming from under ground, that had also been cut at the surface, with no visual surface staining.

4.0 Discussion

YPL's current plan, following completion of the pigging program, is to remove the pipeline and associated facilities. The company plans to complete the removal by the end of the summer of 1996 and the entire removal operation is expected to cost approximately $2 million. As the Company has not yet sought any bids for this work, this cost estimate is not firm. YPL fully expects that whatever the actual costs are, the money will be forthcoming from White Pass' parent company, Federal Industries, whose board of directors will need to approve this expenditure.

It would not appear that any immediate concerns exist with respect to the financial resources available to YPL to undertake its proposed abandonment. However, given that Federal Industries is restructuring after three successive years of losses and that the pipeline is no longer a going concern, with the passage of time, there is a real possibility that YPL's current plans will be over-ridden by other events and priorities.

In a discussion with staff of Environment Canada in Whitehorse it was revealed that an engineering firm may have conducted some form of an audit of the White Pass facilities about one and half years ago. Environment Canada submitted that the engineering firm reviewed Environment Canada's records related to the White Pass facilities. YPL confirmed that Golder Associates prepared a report on its facilities, one or two years ago, in relation to a proposed sale of assets, however, the report could not be released to the Board until the sale of White Pass' petroleum distribution assets is finalized. While the details of the Golder report are not known, the information would probably be of interest to the Board and it could reduce duplicative efforts in further studies.

4.1 Pipeline Pigging Program

YPL plans to run a single pig and to determine the effectiveness of the product recovery by comparing recovered volumes to the estimated volume remaining in the pipeline. By inference, this would indicate how much fuel remains in the pipeline. The shortcomings of this procedure are that YPL does not have a precise estimate of the fuel volume remaining in the pipeline. If the estimate is conservative, even by small percentage, a considerable volume of fuel could be left behind. As well, the procedure does not give a direct indication that all fuel has been removed. Fuel remaining in the pipeline would constitute a significant hazard to public safety and the well being of the environment if the pipeline is to be left in place as eventually the pipeline wall will corrode through and the fuel will escape. If, as planned by YPL, the pipeline is removed residual fuel will be hazardous to the safety of the contractor and company personnel conducting the dismantling and removal and may not be properly contained to ensure that the environment is protected.

A more appropriate pigging procedure would involve measurement of the recovered volume as well as a series of pipeline taps, under controlled conditions, at low points to confirm that all fuel has been removed. At mp 33 it was observed that the interior surface of the pipe was clean and according to YPL cleanliness of the inside surface has been observed at the numerous locations where pipeline cut

outs were made in the course of pipeline maintenance and repair. Cleanliness would be expected as the pipeline has only transported specification refined products.

Given the low pressure used to propel the pig and the monitoring activities implemented while pigging proceeds, any hazards to the public and the employees of the contractor and YPL as a result of the pigging operation would not appear to be significant.

4.2 Pipeline and Right-of-Way

While YPL's current plan involves removal of the pipeline, in terms of public safety the empty pipeline will not present a significant hazard except at those creek crossings and gullies where the pipeline is suspended above the ground. At these locations, unauthorized persons climbing on the pipeline could fall a considerable distance and the pipeline and cables used to support the pipeline could be hazardous to persons operating snowmobiles and all-terrain vehicles along the pipeline. At several crossings of significant creeks and other natural obstacles the pipeline is suspended from railway bridges. With time the cables and straps supporting the pipeline will deteriorate and fail which will allow the pipeline to sag into the creek or gully. This in turn will catch debris and impede natural drainage.

As mentioned, the pipeline crosses numerous improved and unimproved roads. Once the pipeline is empty its presence in these road beds will not be a significant public safety threat and, in fact, the operation to remove these sections would create traffic hazards on the roads and would disturb the existing environment. Accordingly, the pipe in the road bed should be left in place and can be capped or left open. If the pipeline is to be abandoned in place YPL should consider removing a joint or an equivalent length of pipe from each side of the road to ensure that the pipeline is not in the way of any future road development or upgrading.

The pipeline deviates from the railway at several locations along the right-of-way. The pipeline right-of-way is supposed to be owned by YPL, but the Company has never been given official title to the land. A subsequent review of the Board's files on YPL indicates that, with respect to the land rights for the pipeline, the sale of the pipeline in 1961 included a 30 m wide right-of-way for the pipeline where it deviates from the rail right-of-way (1987 Board inspection report). While the pipeline at these locations will not present a significant public safety hazard, other than at those locations mentioned above, it would be advisable to remove the pipeline to prevent unauthorized tampering with the pipeline and accidental hooking of the pipeline by vehicles and machinery operating along it.

If the pipeline is to be left in place, the NEB *Onshore Pipeline Regulations* require that cathodic protection of the pipeline be maintained and the pipeline be filled with a medium approved by the Board. The Yukon pipeline is not cathodically protected and considering that it is an uncoated pipeline lying on the ground surface, cathodic protection is not feasible. In terms of an appropriate fill medium, provided that all fuel is removed from the pipeline, the most practical substance would be air at atmospheric conditions.

If YPL in fact proceeds with its current plan and dismantles and removes all of the facilities at the tank farm, pump station and along the pipeline, a number of environmental issues can be eliminated at this time (i.e. visual effects, future maintenance, etc.). The environmental issues associated with the removal of the facilities generally relate to the potential for contamination during the dismantling and removal of the facilities and the effects of any existing contamination. Although YPL does not intend to further clean the pipe beyond the pigging operations, YPL does intend to contain any residual product during removal. YPL should provide further details of how it will contain any residual product in order to prevent or minimize any disturbance to sensitive areas (i.e. waterbodies, steep slopes, wetlands, etc.) YPL should ensure that appropriate practices are utilized in the removal of the pipe.

One of the concerns associated with the previous gasoline spill sites is the presence of tetra-ethyl lead, a toxic substance. In 1987, 70,000 litres (416 barrels) of leaded gasoline were spilled at mp 42. This site was inaccessible during the site visit, however, at the time of this spill it was estimated that 5 barrels of tetra-ethyl lead (toxic material) would remain in the local environment after the gasoline had either migrated into the surrounding area or vaporized. Two additional spills (mp 29.9 and 90.1) of leaded gasoline occurred in 1987 and 1985, respectively. As indicated above these two sites were included in the 1995 site visit and both locations showed some signs of contamination, with mp 90.1 showing more obvious signs.

With respect to any residual contamination along the pipeline, limited soil contamination probably exists in the wet and/or rocky areas, as most of the product would have been washed away. The area at mp 90.1 that was found to have some soil contamination and should eventually support vegetative growth, however, it may be advisable to undertake some activities to speed up the remediation process (i.e. fertilizers, site preparation activities). Soil analysis at this site would provide information on lead levels in the soil. Tetra-ethyl lead will persist in the environment and it may be the levels of lead that is hindering the regrowth of vegetation at mp 90.1. It should be noted that only selected accessible portions of the line were visited and there may be additional areas along the pipeline with soil/groundwater contamination. These additional areas would most likely be limited to other areas of previous spills and valve sites where existing contamination is evident.

4.3 Upper Tank Farm

It is evident that fuel has seeped from the walls of several of the tanks in the more than thirty years that the tank farm has been used by YPL. In addition, it is possible that fuel has leaked through holes in the floors of the tanks. In order to assess the extent of contamination and to remediate the soil beneath the tanks, removal of all the tanks will be necessary. Given the inherently leaky nature of the bolted seams of the tanks their reliability and value as tanks is severely limited. Accordingly, the most viable option for the tanks is that they be dismantled for scrap metal. As the tanks will contain petroleum vapours a dismantling procedure which ensures that ignition does not occur must be employed. YPL's cleaning procedure is appropriate provided such precautions are taken. Much of the yard piping at the upper tank farm contains fuel. This fuel could be removed by pigging or, alternatively, the yard piping could be removed in a systematic fashion such that the fuel inside is contained at all times.

The tank farm will require further studies to determine the extent of soil contamination and any existence of groundwater contamination. Because the site occurs on a well drained sandy and gravel area, any spillage of product would have migrated downwards more rapidly than across the soil surface. Therefore, with the areas of soil staining it is difficult to determine the extent of any contamination.

A report dated December 1990 was prepared for the Yukon Territorial Government, by Hydrogeological Consultants Limited, to gain information on groundwater capability. A test hole was drilled in relation to the City of Whitehorse Hillcrest/Valleyview Subdivisions and was located to the southwest of the Valleyview Subdivision within the upper tank farm. It appears that the purpose of the water test hole was to determine groundwater/aquifer quantity and yield. Near the end of the pumping interval of Aquifer Test III, groundwater samples were collected and submitted for municipal analysis. The report indicated that none of the chemical constituents analyzed exceeded recommended maximum limits for potable groundwater.

The water well was drilled in the northwest corner of the tank farm. The report does not provide any information on the groundwater patterns at the site, except that it is approximately 60 m below ground surface. It is not known whether the groundwater used in the test would have been entering or exiting

the area under the tank farm site. In addition, the sampling that was undertaken included a standard water test and did not include the parameters that would normally be used to determine whether any hydrocarbon contaminants are present. In addition, groundwater flow patterns would have to be investigated for the upper tank farm site.

The areas of the tanks, meter, truck loading area, valves, and storage areas are of particular concern as all of these areas showed some signs of soil contamination. Representative samples should be taken by a specialist (soil sampling and remediation expert) at all of these areas to determine the type and level of contaminants. Ground water sampling should also be undertaken due to the length of use of the facilities and the amount of soil staining visible at the tank farm site. Evidence of the use of herbicides is prominent at the tank farm. In order to determine whether there is a potential for environmental effects associated with the herbicide residues, YPL should provide further information on its past use of herbicides.

The upper tank farm is adequately secured with a perimeter fence, however, with the work required to dismantle the tanks and remediate or remove contaminated soil, significant public safety hazards will exist (i.e. open excavations and partly dismantled facilities). While this work is underway it will be necessary to ensure that security against unauthorized entry of the tank farm is maintained.

4.4 Carcross Pump Station Site

Considering the proximity of this site to the town of Carcross and that no perimeter fence exists, controlling public access to the site will not be possible. The site will continue to be used as a recreation site and the mechanics pit at the site will continue to be used for servicing vehicles. The most appropriate option for controlling the unauthorized use of the facilities would be to dismantle and remove all the facilities and return the site to its natural state.

As the tank at the site contained petroleum at one time it should be dismantled as per the dismantling procedure for the tanks at the upper tank farm. In addition, some of the yard piping could still contain fuel. It should be cut up and removed in a systematic manner which will ensure that any remaining fuel is not spilled.

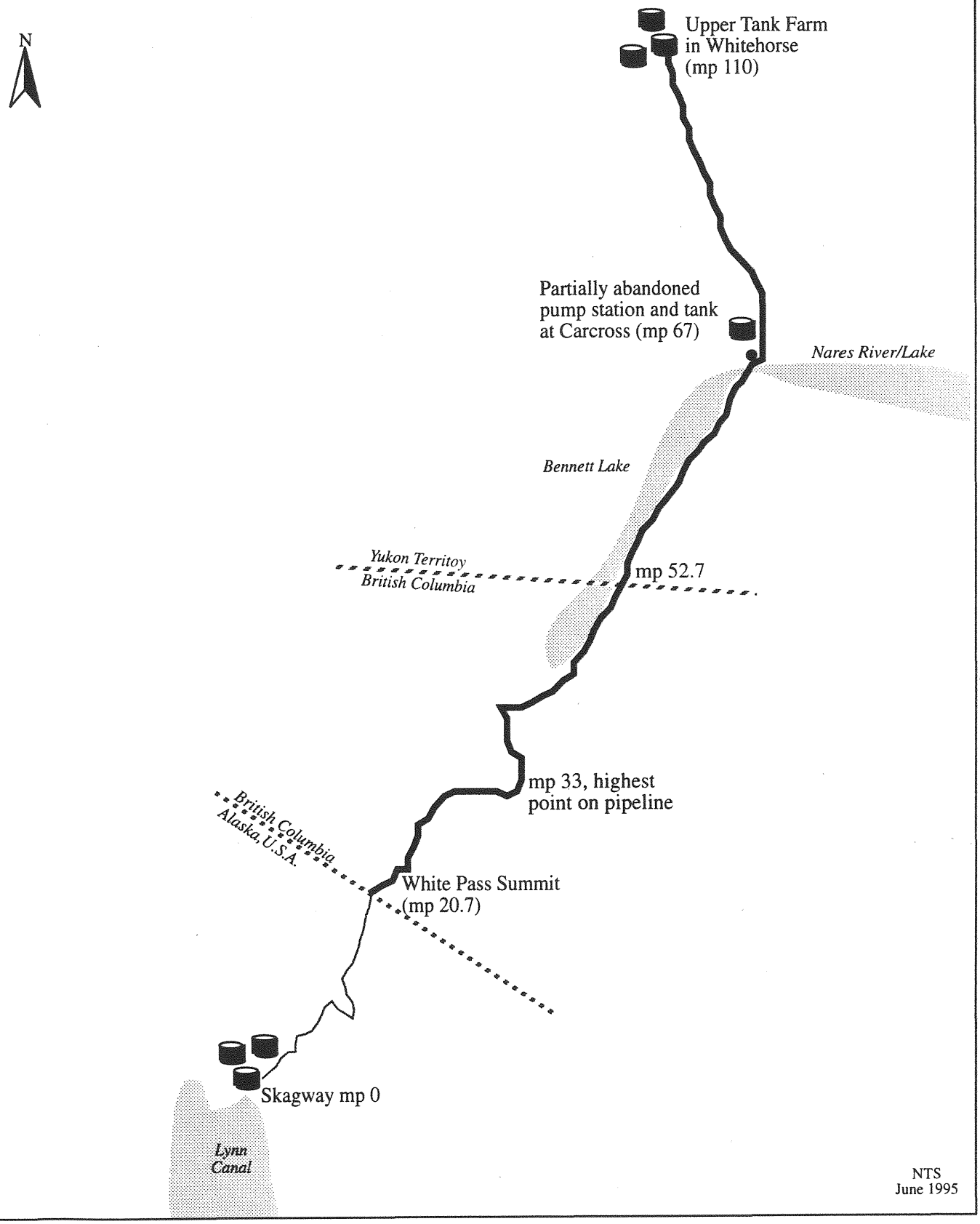
Based on the Board's records of a 1990 Board inspection, the Carcross pump station was found, at that time, to be in a poor state with debris from the former buildings heaped up in different areas and open sumps and basements. In correspondence to the Board in 1990, YPL indicated that it would clean up the pump station site and fill in the old pits due to safety concerns. It appears that certain facilities may have been buried at the site, such as part of the southern most building foundation and a below grade wooden enclosure. It is not clear what YPL's intentions are with respect to any of the buried facilities. The areas of concern at the pump station include the soil staining around the pipes that are protruding from the ground, the area where oil changes have taken place, and the large amount of scrap and refuse at the site. With respect to the areas of the soil staining at the protruding pipe ends, the hydrocarbon product appears to be seeping upwards and further investigation should be undertaken to determine the source. The areas of soil staining appear to be relatively fresh areas of spillage/seepage, however, these areas could be confirmed through further investigations.

With respect to future land use, it is assumed that the land at the Carcross pump station would revert to the surrounding use which appears to be a natural setting with some recreational use.

5.0 Conclusions

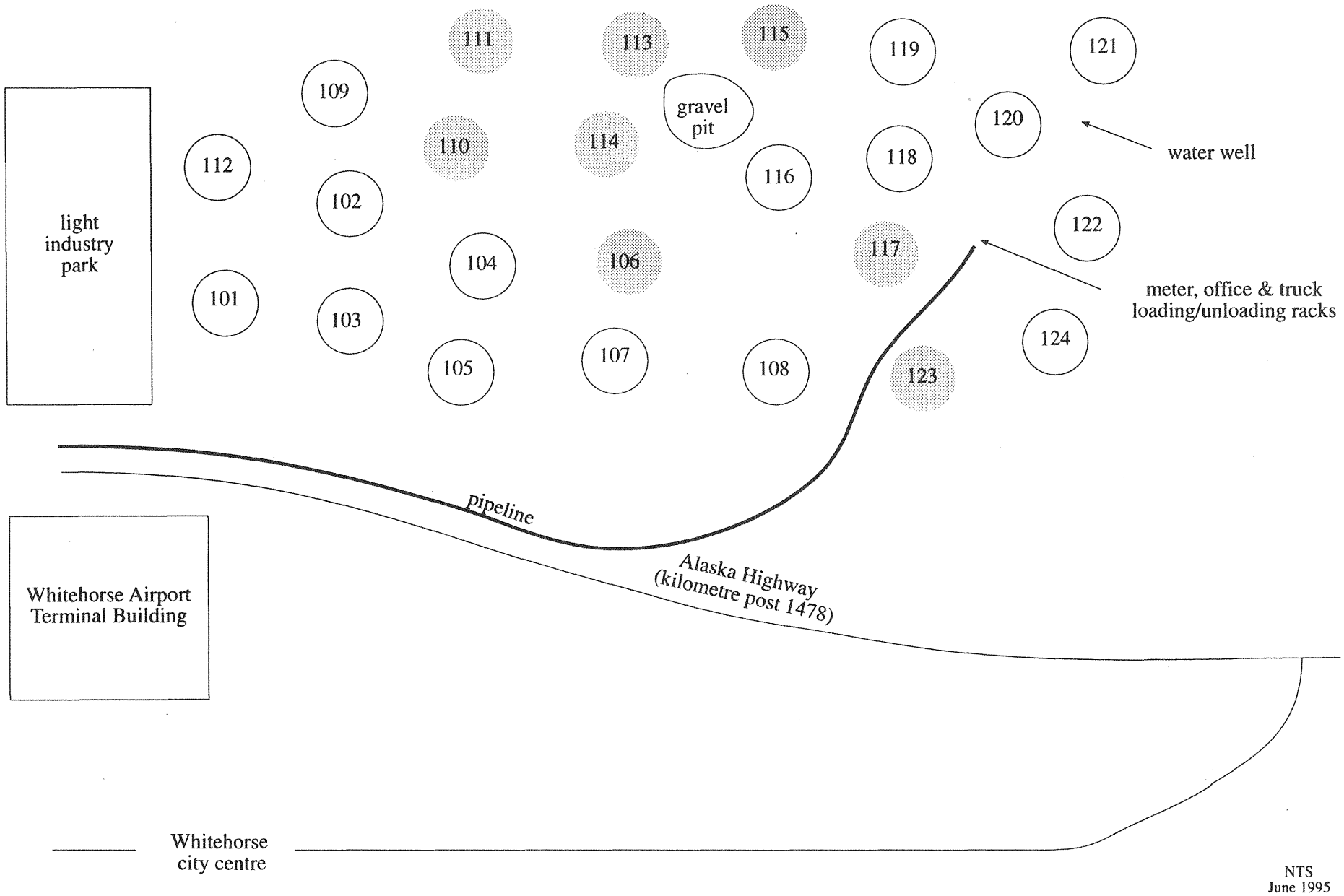
1. The pigging program undertaken by YPL to remove the fuel from the pipeline will remove most of the fuel from the pipeline, however, it will be essential to ensure that all fuel is removed from the pipeline regardless of whether the pipeline is removed or abandoned in place. The program is being carried out in a manner which will not expose the public or YPL's contractors and employees to significant safety hazards and will not cause significant damage to the environment. Upon successful completion of the pigging program the interior surface of the pipeline should be sufficiently clean that either removal of the pipeline or abandonment in place will be possible.
2. The tanks at the upper tank farm have leaked over their years of service, principally from the bolted seams although leaks in the floors may also have occurred. The tanks have little or no value as storage vessels, therefore the most viable option is that they be dismantled and scrapped. Yard piping at the tank farm will contain fuel unless these lines are pigged clean. Special precautions must be implemented to avoid spilling any remaining fuel if the lines are merely to be cut up and removed. The most likely future use of the upper tank farm site would appear to be residential or as a source of sand and gravel, or both.
3. Based on the site visit, further detailed environmental studies should be undertaken at the upper tank farm, due to the amount of soil staining and obvious leaks at the site. A Phase I and II environmental site assessment should provide sufficient information on the concerns associated with these soil stained areas, including the determination of the locations, level and extent of contamination of the soil and groundwater.
4. The Carcross pump station site is used as a recreational site and a derelict mechanics pit is used for servicing vehicles.
5. Some areas of soil staining were found at the Carcross pump station which need further investigations and evidence was found which indicates that facilities may have been buried. A Phase I environmental assessment should provide sufficient information on the sources and extent of contamination, as well as further information on additional buried facilities. Depending on the extent of soil staining, removal of the soil may eliminate the need for a Phase II study.
6. Due to the number of previous spills along the pipeline, and the results of the site visit, there may be additional areas with existing soil contamination. A Phase I study, to delineate the sites where further investigation and sampling is required, should provide sufficient information on the condition of the areas where spills have occurred in the past.
7. Evidence exists which indicates that herbicides have been used at the upper tank farm and along the pipeline right-of-way.
8. Numerous discarded sections of pipe and pipeline components and a considerable amount of debris resulting from the operation of the pipeline is scattered along the pipeline right-of-way and about the upper tank farm and Carcross pump station site. From an environmental perspective, the removal of all of the facilities associated with the pipeline (except buried pipe at road crossings), upper tank farm and Carcross pump station site would be preferable.
9. A report was prepared by Golder Associates, in respect of a proposed sale of White Pass' petroleum distribution assets, which may include some investigations and sampling studies of the YPL facilities. Therefore, some of the concerns and outstanding questions associated with the facilities may have already been addressed in the report.

Figure 2.1: The Yukon Pipeline



f:\maps\oil\yukon

Figure 3.1: Plan View of the Upper Tank Farm



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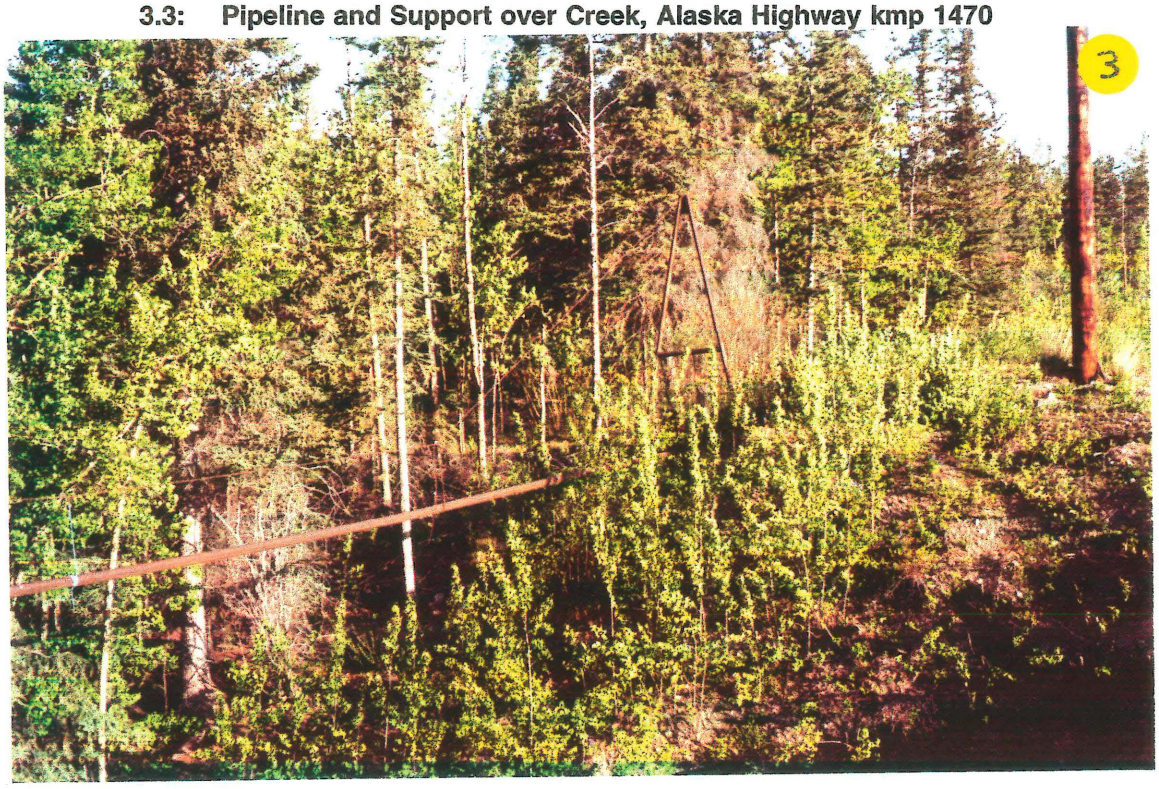
3.1a: Compressor for Pigging Pipeline

3.1b: Pig Launching Assembly

3.2: Inside Surface of Pipeline

3.3: Pipeline and Support over Creek, Alaska Highway kmp 1470



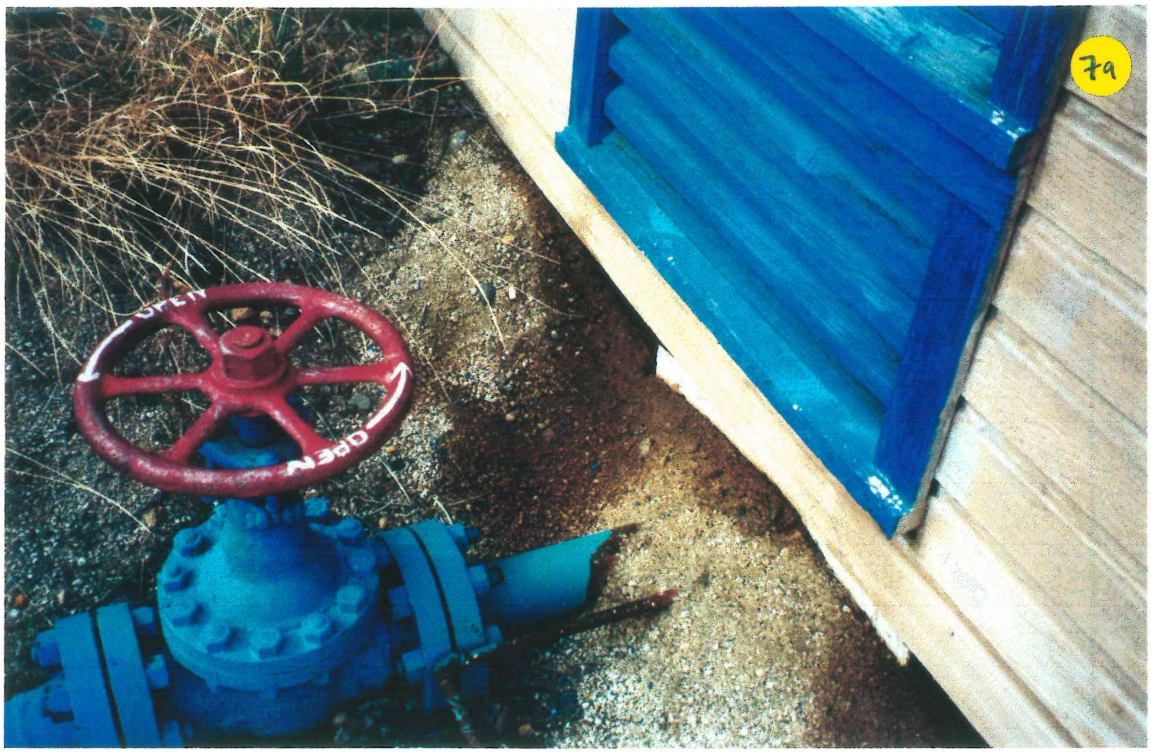
3.4: Valve at Alaska Highway kmp 1478

3.5a: Spill Site, mp 90.1

3.5b: Spill Site, mp 90.1

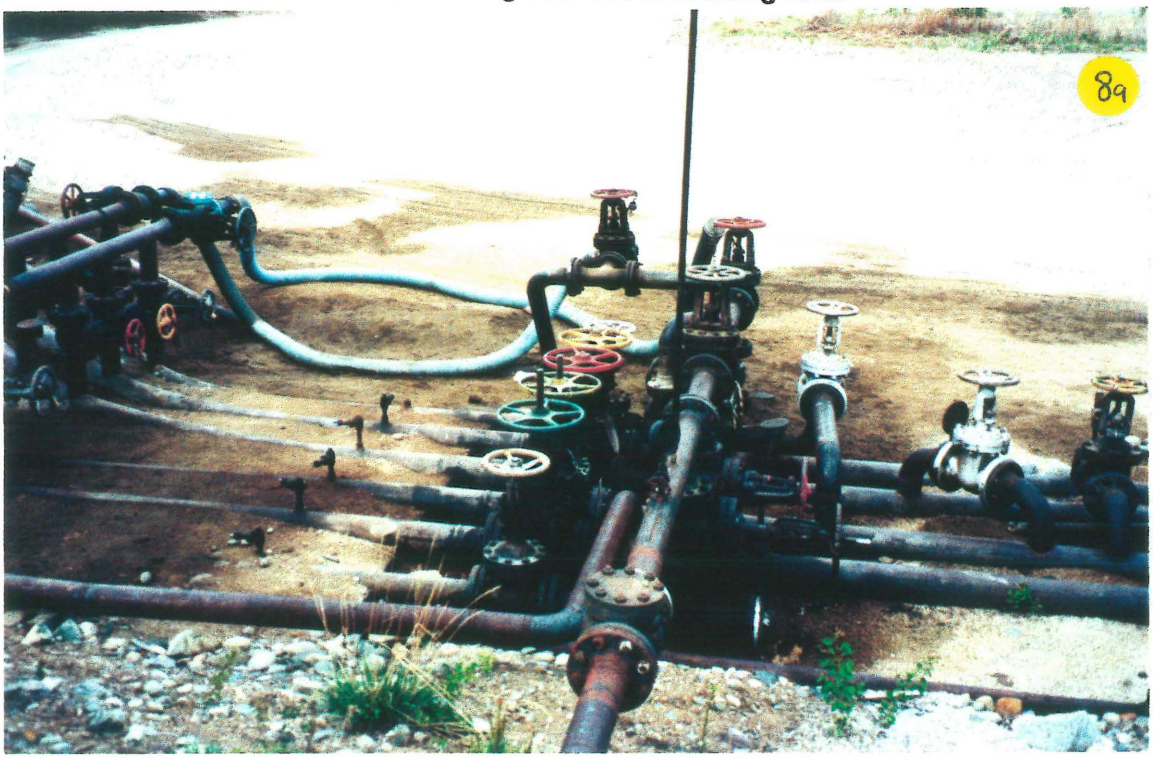
3.6: Spill Site, mp 29.9

3.7a: Soil Staining near Meter Building

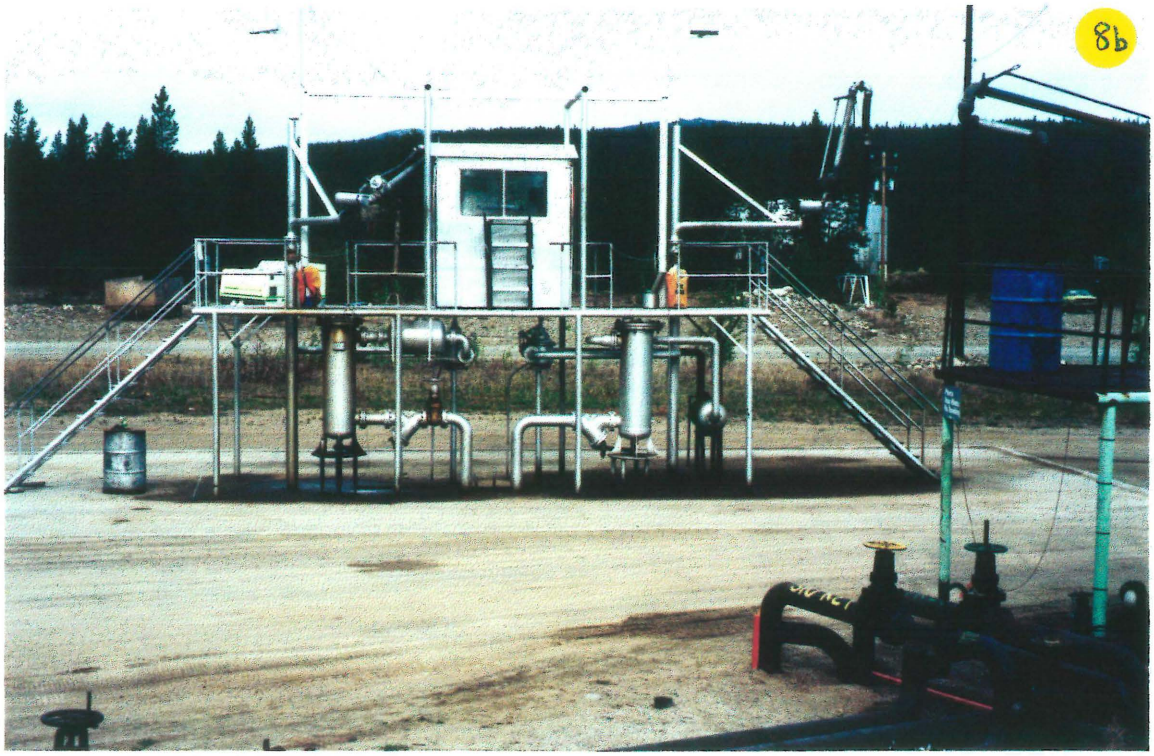


3.7b: Soil Staining near Meter Building

3.8a: Soil Staining near Truck Loading Area



3.8b: Soil Staining near Truck Loading Area



3.9: Soil Staining in Depression near Truck Loading Area

3.10a: Leakage from Tank Wall Seams

3.10b: Leakage from Tank Wall Seams

3.11a: Soil Staining at Tank 122

3.11b: Soil Staining at Tank 122

3.12a: Soil Staining at Tank 123

3.12b: Soil Staining at Tank 124

3.12c: Soil Staining at Tank 124

3.13: Indication of Herbicide Use on Tank Berms

3.14: Tank at Carcross Pump Station Site

3.15: Remnants at Carcross Pump Station Site

3.16: Barrels and Debris near Carcross Pump Station Site

3.17: Evidence of Use of Carcross Pump Station Site for Recreation

3.18: Mechanics Pit at Carcross Pump Station Site

3.19: Debris at Carcross Pump Station Site

3.20: Soil Staining from Motor Oil at Carcross Pump Station Site

3.21: Soil Staining at Carcross Pump Station Site

CANADA

AN INVITATION TO COMMENT ON THE ABANDONMENT OF THE YUKON PIPELINES LIMITED PETROLEUM PRODUCTS LINE

Yukon Pipelines Limited ("Yukon") has filed an application dated 12 July 1995 regarding its intention to abandon the Canadian portion of the 114.3 mm O.D. Yukon Pipeline and the 24 tanks and associated facilities at its Whitehorse tank farm.

The application covers the 144.5 km Canadian section of the 177 km long pipeline which extends from Skagway, Alaska to Whitehorse, Yukon. Refined products were shipped from Vancouver to Skagway and then transported via the pipeline to the Whitehorse tank farm. Operation of the line ceased in October 11, 1994, and the contents of the line were removed in May and June 1995.

The Board hereby gives notice of its intention to consider this matter pursuant to section 74 of the *National Energy Board Act*. A copy of the application, and the inspection report prepared by the Board, can be viewed at the following locations:

Atlin, B.C.
Office of the Government Agent, Atlin, B.C.
Post Office

Carcross, Yukon
Band Office
Health Centre
Post Office
Caribou Hotel
BTM Store
Montana Manor

Whitehorse, Yukon
Whitehorse Public Library
Economic Development Department, Oil and Gas Resources Branch, Ste. 209, 212 Main St.

Any party, other than Yukon Pipelines Limited, who wishes to make a submission to the Board on this subject, shall file their submission no later than 12:00 p.m. P.D.T. or 1:00 p.m. M.D.T. on Friday, 29 September 1995. A copy of any submission filed with the Board shall be served on Yukon Pipelines Limited, P. O. Box 4070, Whitehorse, Y.T., Y1A 3T1 at the same time it is filed with the Board.

J.S. Richardson
Secretary

311 Sixth Avenue S.W.
Calgary, Alberta
T2P 3H2

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Facsimile/Télécopieur:(403) 292-5503

National Energy Board | Office national de l'énergie

CANADA

INVITATION À PRÉSENTER DES OBSERVATIONS SUR LA CESSATION D'EXPLOITATION DE L'OLÉODUC DE YUKON PIPELINES LIMITED

Yukon Pipelines Limited («Yukon») a déposé une demande, en date du 12 juillet 1995, concernant son intention de cesser d'exploiter la partie canadienne de l'oléoduc Yukon de 114,3 mm de diamètre extérieur et les 24 citernes et installations connexes de son parc de citernes de Whitehorse.

La demande porte sur les 144,5 km de section canadienne de l'oléoduc de 177 km de longueur qui s'étend de Skagway (Alaska) jusqu'à Whitehorse (Yukon). Les produits raffinés étaient acheminés de Vancouver à Skagway, puis transportés par oléoduc jusqu'au parc de citernes de Whitehorse. La canalisation a cessé d'être exploitée le 11 octobre 1994, et son contenu, extrait en mai et juin 1995.

L'Office signale par la présente son intention d'examiner la question aux termes de l'article 74 de la *Loi sur l'Office national de l'énergie*. Une copie de la demande et du rapport d'inspection préparé par l'Office peut être consultée aux endroits suivants :

Atlin, C.-B.
Bureau de l'agent du gouvernement, Atlin, C.-B.
Bureau de poste

Carcross, Yukon
Bureau de la bande
Centre de santé
Bureau de poste
Hôtel Caribou
Magasin BTM
Manoir Montana

Whitehorse, Yukon
Bibliothèque publique Whitehorse
Ministère du développement économique, Direction des ressources pétrolières et gazières, Ste. 209, 212 rue Main

Toute partie, autre que Yukon Pipelines Limited, souhaitant déposer une présentation auprès de l'Office à ce sujet doit le faire d'ici à midi (HAP) ou 13 heures (HAR) le vendredi 29 septembre 1995. Une copie de toute présentation déposée auprès de l'Office doit aussi être signifiée à Yukon Pipelines Limited, C. P. 4070, Whitehorse, Yukon, Y1A 3T1 au même moment.

Le secrétaire,

J.S. Richardson

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Calgary, Alberta
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Advertisement in Yukon News

National Energy Board

An Invitation To Comment On The Abandonment Of The Yukon Pipelines Limited Petroleum Products Line

Yukon Pipelines Limited ("Yukon") has filed an application dated 12 July 1995 regarding its intention to abandon the Canadian portion of the 114.3 mm O.D. Yukon Pipeline and the 24 tanks and associated facilities at its Whitehorse tank farm.

The application covers the 144.5 km Canadian section of the 177 km long pipeline which extends from Skagway, Alaska to Whitehorse, Yukon. Refined products were shipped from Vancouver to Skagway and then transported via the pipeline to the Whitehorse tank farm. Operation of the line ceased in October 11, 1994, and the contents of the line were removed in May and June 1995.

The Board hereby gives notice of its intention to consider this matter pursuant to section 74 of the National Energy Board Act. A copy of the application, and the inspection report prepared by the Board, can be viewed at the following locations:

Atlin, B.C.
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Post Office

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Montana Manor

Whitehorse, Yukon
Whitehorse Public Library
Economic Development Department, Oil and Gas Resources Branch, Ste. 209, 212 Main St.

Any party, other than Yukon Pipelines Limited, who wishes to make a submission to the Board on this subject, shall file their submission no later than 12:00 p.m. P.D.T. or 1:00 p.m. M.D.T. on Friday, 29 September 1995. A copy of any submission filed with the Board shall be served on Yukon Pipelines Limited, P. O. Box 4070, Whitehorse, Y.T., Y1A 3T1 at the same time it is filed with the Board.

J.S. Richardson
Secretary