ALBERTA ENERGY AND UTILITIES BOARD
Calgary Alberta

CANADIAN CRUDE SEPARATORS INC.
APPLICATIONS TO CONSTRUCT AND
OPERATE AN OILFIELD WASTE
MANAGEMENT FACILITY,
DRILL A DISPOSAL WELL,
CONSTRUCT AND OPERATE A PIPELINE, AND **Decision 2002-055**
OPERATE A DISPOSAL SCHEME **Applications No. 2000343, 1242258,**
EDSON FIELD **1096927, and 1096321**

1 DECISION

Having carefully considered all of the evidence, the Alberta Energy and Utilities Board (EUB/Board) has determined that approval of Applications No. 2000343, 1242258, and 1096927 is in the public interest. The EUB hereby approves the applications subject to the applicant's strict adherence to the commitments and conditions summarized in the Appendix. Application No. 1096321 is approved subject to the drilling and evaluation of the proposed well and to adherence with the wellbore integrity requirements of *Guide 51: Injection and Disposal Wells*.

2 APPLICATIONS AND HEARING

2.1 Applications

Canadian Crude Separators Inc. (CCS) submitted the following:

- Application No. 2000343, to construct an oilfield waste management facility at Legal Subdivision 7 of Section 18, Township 53, Range 18, West of the 5th Meridian (LSD 7-18-53-18W5M) (the proposed 7-18 facility; the West Edson facility). The facility would consist of a treatment process for oilfield waste that would utilize heat, chemical treatment, and tank settling to separate oil, water, and solids; a custom treating process to separate crude oil from crude oil emulsions; tanks to receive fluids for deep well disposal; a tank wash area; and a dirty/cleaned tank storage area.

- Application No. 1242258, to drill a well at a surface location of LSD 12-16-53-19W5M (the 12-16 well).

- Application No. 1096927, to construct and operate 7.8 kilometres (km) of pipeline to transport class 1b waste fluids from the proposed 7-18 facility to the applied-for 12-16 well.

- Application No. 1096321, to inject class 1b fluids into the Leduc Formation through the applied-for 12-16 well.

2.2 Interventions

The EUB received several objections to the applications from area residents living near the proposed 7-18 facility. As the Board believed they may be affected by the proposed facility or other components of the project, it determined that a public hearing should be held to consider the applications.

2.3 Hearing

Prior to the hearing, the Board panel and staff viewed the proposed 7-18 facility site and surrounding area on February 4, 2002. The applications and associated interventions were considered at a public hearing in Edson, Alberta, on February 5, 6, and 7, 2002, before Board Members B. F. Bietz (Presiding) and J. R. Nichol and Acting Board Member J. B. Railton. Those who appeared at the hearing are listed in the following table.

At the hearing, the applicant indicated that it intended to alter the waste management facility's footprint. Following the close of the hearing, the Board determined that additional information from CCS was required as a result of that change.

A letter requesting additional written submissions from CCS was sent on February 20, 2002, and CCS filed its response on March 21, 2002. The Board then provided an opportunity for interrogatories to the applicant and additional submissions by all of the parties, with a final submission date of April 26, 2002.

The West Edson Landlords Coalition (W.E.L.L.) requested on April 18, 2002, that the oral portion of the hearing be reopened, and the Board received a response from CCS on April 26, 2002. In a letter dated May 10, 2002, the Board provided its reasons for dismissing the request to reopen the hearing.

The location of the proposed waste management facility, pipeline, and disposal well are shown on Figures 1 and 2.

THOSE WHO APPEARED AT THE HEARING

Principals and Representatives (Abbreviations Used in Report)	Witnesses
Canadian Crude Separators Inc. (CCS) B. K. O'Ferrall, Q.C.	R. Amirault, P.Eng. F. Vanden Elsen D. Engel D. Burkard J. Machaelian M. LaBerge L. Smith G. Latonus, of Gartner Lee Limited R. Wright, P.Eng., of HFP Acoustical Consultants Corp.
West Edson Landlords Coalition (W.E.L.L.) R. C. Secord	D. Crawford C. Crawford J. Bugg H. Bugg F. Makowecki C. Thompson E. Knutson N. Chapman J. Armstrong
D. and B. Thebeau	D. and B. Thebeau
Alberta Energy and Utilities Board staff J. P. Mousseau, Board Counsel G. McLean, C.E.T. B. Austin, P.Geol. S. Halla, A.Sc.T. C. Arce-Abrego, C.E.T. G. McClenaghan, P.Eng. K. Eastlick, P.Eng.	

3 ISSUES

The Board considers the issues respecting these applications to be

- need for the facilities
- site suitability
- site design and operating procedures
- environmental impacts
- effects of increased traffic
- disposal scheme
- public consultation

4 NEED FOR THE FACILITIES

4.1 Views of the Applicant

CCS stated that oilfield waste treatment, recovery, and disposal facilities are a necessary part of the oil and gas industry for both environmental protection and energy resource conservation. It explained that the number of oil and gas wells in western Canada had grown from 40 000 to 125 000 producing wells in the last 20 years and that new market areas, such as west Edson, were growing with the record amount of drilling.

CCS explained that, if approved, the proposed oilfield waste management facility would replace a currently approved and operating facility, the CCS Edson Wolf Lake facility (East Edson facility), located at LSD 5-24-51-15W5M. CCS explained that the East Edson facility became a CCS operation through its acquisition in 1997. However, it stated that the East Edson facility was not connected to a crude oil pipeline, did not have a fuel gas connection, and did not meet the current design requirements and therefore would require considerable investment to rebuild to current standards. Furthermore, CCS stated that, based on an analysis of truck receipts at its existing East Edson facility, the main market for its services now existed west of Edson. With the exception of produced water, 89 per cent of the oilfield wastes currently received at the East Edson facility were generated west of Edson.

CCS stated that there was a clear need for waste treatment facilities in the Edson area. The company noted that the selected location for the proposed 7-18 facility was based on its attempts to place its operations as close to customers and downstream services, such as the Trans Mountain pipeline terminal, as practical. CCS stated that the proposed location for the new facility would result in reduced transportation costs for its customers, as well as less traffic through Edson. CCS indicated that if the proposed 7-18 facility were approved by the EUB, its intention was that the East Edson facility would in the future only receive produced water. The other oilfield waste handling equipment at the East Edson facility would be decommissioned upon commencement of operations at the proposed 7-18 facility.

4.2 Views of the Interveners

W.E.L.L. and Mr. and Mrs. Thebeau did not challenge in general the need for oilfield waste disposal facilities. They did question the right of disposal companies to build and locate these facilities in what they characterized as a populated area.

4.3 Views of the Board

The Board believes that oilfield waste management facilities are an important and integral part of orderly operation in the oil and gas industry. The Board also accepts that in order to remain competitive, the waste management industry needs to match both its rate of growth and location to that of its customers. The Board notes that the East Edson facility has received a relaxation from the requirements subject to the outcome of this hearing and would require substantial upgrading in order to make it a viable and compliant waste disposal facility. The Board is satisfied that there is a need for either a new or upgraded facility in the region.

5 SITE SUITABILITY

5.1 Views of the Applicant

CCS noted that almost all of its facilities were located proximal to an existing clean oil terminal. As a result, CCS indicated that during its initial site selection process it had looked at Niton Junction, where a clean oil terminal already existed. However, the company felt that the existing site was too small and so approached the adjacent landowner and asked if he would sell some of his land to expand the Niton Junction site. This request was turned down.

CCS stated that it had also spoken to Gibson Petroleum Company Ltd. (Gibson) regarding the possibility of making use of its terminal site west of the Trans Mountain oil terminal, but because the site was less than 5 acres, it was determined to be too small for CCS's proposed facility.

CCS indicated that it chose the applied-for site based on the following eight site selection criteria:

- proximity to a large existing market west of Edson that will continue to grow;
- proximity to an existing crude oil pipeline terminal;
- site size and availability;
- access to a known effluent disposal zone;
- truck access off of Highway 16;
- proximity to three-phase power and a natural gas connection;
- the distance to residents, the nearest being approximately 1 km away; and
- low environmental sensitivity, with the site being next to an existing oilfield facility and close to a major highway.

At the hearing, CCS amended the waste facility application to incorporate changes in the project footprint and later confirmed these amendments through the written proceedings. CCS stated that the need to amend the development area resulted from the denial by the County of Yellowhead

(the County) for approval to close the access road that loops around the former housing units (see Figure 2) and to close the park reserve at the southern boundary of the proposed site. As this parcel of land was no longer available, CCS proposed to push the facility footprint back (north) from the access road and turn it clockwise approximately 20 degrees from the original plan. CCS stated that the amended footprint, which incorporates approximately 11.5 acres, was still sufficient to properly facilitate truck and tank movements around the site and to carry out all other necessary operations.

5.2 Views of the Interveners

W.E.L.L. stated that the proposed site was unsuitable for the facility. It felt that a much more publicly acceptable alternative would be for the East Edson facility to be upgraded to current standards and continue to be used as CCS's waste management facility for the area.

W.E.L.L. made the following arguments for using the East Edson site in preference to the development of a new site:

- As the East Edson site was running at 80 to 100 per cent utilization, its proximity to markets was clearly acceptable.

- Only 150 trucks per year were currently required to ship oil from East Edson to Niton Junction, and therefore an oil pipeline connection was not essential.

- The adequacy of the size of the proposed site, particularly with the decision of the County to not make the additional land available, was questionable, while that of the East Edson site was not.

- The safe access and egress of trucks to the proposed site was also in doubt, which was not an issue at the East Edson site.

- There are no residents close to the East Edson facility.

W.E.L.L noted that the proposed facility is an environmentally sensitive area, particularly given the proximity to Sundance Creek and the high hydraulic conductivity of the soils. They also suggested that for a new site to be acceptable, it should include the disposal well.

Mr. Thebeau stated that he believed CCS chose the proposed site for purely economic reasons. He indicated that CCS told the residents that it had investigated other sites but that the proposed site was always preferred and that CCS was prepared to take the application to a public hearing if necessary, regardless of the concerns raised by the area residents.

Mr. Thebeau indicated that he believed that a waste disposal site carried with it a stigma and that even if the facility were equipped with the latest technology, people would not want to purchase a property near the site. He stated that there was nothing that CCS could do to convince him that he would want it at the proposed location. He stated that he firmly believed that this type of facility belonged in a nonpopulated area. He also argued that the proximity of Sundance Creek and the hydraulic conductivity of the area soils made the proposed site unsuitable for such a

facility.

Mr. Thebeau suggested that a potentially better location for the waste management facility would be at the site CCS proposed for the disposal well. He felt that the disposal well site had the advantage of having no area residents nearby and better soil conditions, reducing the risk of contaminating any streams or creeks. Using this site would also eliminate the need to construct 7.8 km of pipeline.

5.3 Views of the Board

The Board notes that the criteria used for the location of a waste management facility differ somewhat from those used for conventional oil and gas development in that the facilities are not directly tied to an oil or gas field. While this appears to provide the waste industry some additional flexibility in choosing new sites, the Board accepts that CCS must still balance a number of primarily economic and operational factors in finding an acceptable location for its facilities.

In this case, the Board is prepared to accept the views of CCS, which were not contested at the hearing, that its primary marketplace for waste processing is now located substantially west of the current East Edson site. The Board also finds it reasonable to assume that CCS would have invested in the existing East Edson site if it believed that there was a reasonable expectation that it could be economically upgraded to current standards for waste management facilities.

The Board believes that CCS was also acceptably diligent in searching for potentially suitable sites and is prepared to accept that the proposed site does offer CCS economic and operational advantages, such as proximity to a clean oil terminal and easy access for trucks, which its current facility does not.

Therefore, assuming that the proposed site can be found to adequately protect the environment and the health and safety of area residents, the Board is prepared to accept that the proposed site is suitable.

6 SITE DESIGN AND OPERATING PROCEDURES

6.1 Site Design

6.1.1 Views of the Applicant

CCS noted that it intended to construct an integrated facility to carry out oilfield waste processing, custom oil treating, waste fluid disposal, and tank washing operations. Residual solids disposal would be carried out at separate facilities. It indicated that its proposed design met or exceeded all EUB requirements for oilfield waste management facilities.

CCS described oilfield wastes as being by-products of the upstream petroleum industry and that through processing, additional crude oil could be recovered. Recovered crude oil and any oil/water emulsions received for custom treating would be upgraded to meet pipeline

specifications and then would be transferred to the adjacent clean oil terminal. All residual waste fluids, including tank wash water, would be collected into on-site tanks and then pipelined to the proposed off-site disposal well. Any residual solids would be sent off site to either land fill or cavern disposal.

CCS divided the active footprint of the oilfield waste management facility into five main areas:

- an oil and gas solids processing area composed of steel hopper tanks, the steel gravity compression system (GCS) tank, and the solids receiving and processing pad;
- a main tank farm area composed of ten steel aboveground tanks and the flare system;
- a facility area composed of the office, the motor control center building, the treater and boiler buildings, and the injection pump building;
- a tank/truck wash area composed of the washing equipment and a vapour scrubbing unit; and
- a dirty/cleaned tank storage area.

With respect to containment, CCS stated the following:

- The oil and gas solids process area, main tank farm area, and tank/truck wash area would have a concrete working surface underlain by a dual synthetic liner and leak detection system.
- The facility area housing the treater would have a concrete working surface underlain by a single synthetic liner and leak detection system.
- The traffic/drive areas and the dirty/cleaned tank storage area would have a woven geotextile fabric placed over the prepared subgrade (native clay compacted to 95 per cent of Standard Proctor Density), which would then be covered with pit run gravel followed by crushed gravel.
- All load/unload risers would be equipped with spill boxes to collect leakage from truck hoses as they are being attached and detached.

CCS noted that as a result of the amended footprint for the facility, the site would need to undergo cut and fill procedures to appropriately grade and prepare it for construction. The northern portion of the site would be cut down and used for fill on the southern portion of the site. This would result in approximately 3 m of native clay base on the areas where the main processing and tank farm would be constructed.

CCS stated that it believed that the proposed containment systems met or exceeded the requirements of *Guide 55: Storage Requirements for the Upstream Petroleum Industry* and *Guide 58: Oilfield Waste Management Requirements for the Upstream Petroleum Industry*. CCS also stated that the synthetic liners would be installed professionally by third-party contractors, which would sign off on installation and submit a warranty at that time.

CCS noted that the active footprint of the facility would be designed so that any precipitation and/or spillage would be captured and directed to the receiving hopper. From there the fluids would be recycled into the processing part of the facility.

With respect to precipitation outside of the active footprint, CCS indicated that the grade surrounding the site would allow rain or snow melt to drain to clay-lined perimeter ditches, which in turn would feed to a surface water collection pond located in the southwest corner of the site. Clay berms on the outside of the perimeter ditches would prevent surface waters from adjacent lands from entering the perimeter ditches.

CCS explained that the surface water collection pond would be sized to accommodate a 1-in-30-year, 24-hour rainfall, which is beyond the 1-in-10-year, 24-hour requirement specified by the EUB. CCS also noted that an additional 25 per cent safety factor was incorporated into the pond's design and that it would be lined with a synthetic liner. CCS stated that if the level of water in the pond needed to be reduced, the requirements outlined in *Guide 55* would be followed (i.e., the collected waters would be tested, and if they met criteria, released onto land). In the event that a storm was causing the pond to fill rapidly, creating a potential overflow situation, the water would be transferred to and stored in a tank.

With regard to emissions controls, CCS said that waste fluid, oil, and produced water tanks would be equipped with a natural gas vapour space blanket and would be vented to the flare. CCS stated that the flare would be intermittent and that discharges to flare would typically occur only when trucks were unloading into one of the tanks. It said that the flare would be equipped with air-assist to improve combustion, a pilot, an automatic igniter, and flame-failure detection.

6.1.2 Views of the Interveners

The interveners raised a number of concerns about the proposed facility design and construction, with a particular focus on the ability of the site to contain and collect both spills and precipitation contaminated by contact with hydrocarbon from the site. For example, they questioned whether the area of the site that would be used for cut and fill would have the clay content that CCS suggested. They also questioned the appropriateness of the proposed synthetic liner, whether CCS had experience with this liner at any other CCS facilities, and what would happen in the event that the liner leaked.

The interveners noted that CCS had not included secondary containment in the design for the dirty/cleaned tank storage area and expressed the possibility for these tanks to be a source of release that could contaminate the site's surface runoff water. The interveners also expressed concerns about the potential for spills to occur outside of the secondary containment areas and for waste to be tracked on truck tires beyond the secondary containment areas, as both of these were potential sources of surface and groundwater contamination.

The interveners were particularly concerned about the design and size of the surface water collection system. They noted their personal experience with the frequency and duration of high-intensity rainfall events in the Edson area. In particular, they were concerned as to whether the perimeter ditches were sloped appropriately to direct collected waters to the pond and whether

there was sufficient capacity in the storm water collection pond. The interveners noted that the proposed facility was proximal to Sundance Creek and so any release of contaminated waters could have significant, if not disastrous, environmental effects.

6.1.3 Views of the Board

The Board expects oilfield waste management facilities to be designed to minimize impact to the air, groundwater, surface water, and soils on or around the site, and ultimately to allow the site to be readily restored for the next intended land use. To accomplish this, site-related factors must be considered and incorporated into the design of the facility.

The Board notes that CCS has incorporated a number of mitigative measures into the design of the facility to compensate for specific site features at the 7-18 location. The Board, after considering the various submissions made by CCS, is now convinced that the proposed facility design meets and in some cases exceeds the requirements set out in *Guide 55* and *Guide 58*.

Due to the rapid groundwater movement beneath this site (see Section 7.2), the Board does believe that, notwithstanding the proposed design criteria, if wastes were spilled onto an unprotected area of the site, there would still be an unacceptably high potential for the release of contaminants to the underlying aquifer and from there into Sundance Creek. Therefore, the Board will require CCS to line the entire site with a compacted clay liner, line the entire drainage ditch with a synthetic liner, and construct a containment system for the dirty/clean tank storage area consisting of a synthetic liner underlying a concrete slab with an associated leak detection system. The Board will also require CCS to provide the EUB with a third-party quality assurance report respecting the construction of the entire site prior to the start-up of any operations (see Appendix).

6.2 Material Acceptance and Processing

6.2.1 Views of the Applicant

CCS stated that only materials generated from the upstream petroleum industry would be accepted at the West Edson facility.

With respect to waste processing, CCS explained that vacuum trucks containing sweet waste solids/slurry would unload into one of two unheated receiving hoppers. These materials would then be transferred to the mixing chamber. Vacuum trucks containing sour waste solids/slurry would unload into a sour waste-receiving tank (mixing chamber), a closed vessel equipped with a sweet gas blanket and two truck-receiving camlocks. Sweet loads containing light hydrocarbons could also be unloaded into the sour closed system as appropriate to avoid the release of flammable vapours.

The waste solids/slurry would then be pumped from the mixing chambers to the GCS, where temperature and retention time would be used to separate the liquid from the solids. The resulting oil, emulsion, and water would be pumped to the custom treating or water disposal systems, as applicable. Solids would be augered out of the bottom of the GCS and would either be directly trucked to another facility for further treatment and/or disposal or be placed on the

solids processing pad.
To help dry the solids and then keep them dry during rain events, the solids processing pad would be heated and covered with a roof. CCS indicated that end dump trucks delivering solid types of wastes (e.g., spill debris, contaminated soil, flare pit material, frac sand) would unload onto the pad. CCS stated that quick lime, which creates an exothermic reaction that facilitates drying of wet solids and flashes off volatile compounds, would not be used. Solids would be tested for landfill acceptability and, if appropriate, trucked to an approved CCS landfill. Solids not meeting landfill criteria would most likely be sent to an approved CCS waste cavern.

CCS explained that hydrocarbons recovered from waste processing would be pumped to one of the two emulsion tanks. CCS noted that oil emulsions from upstream operations (i.e., custom treating) would be received via tanker trucks and offloaded into the emulsion tanks. Product from the emulsion tanks would then be sent through the treater, with clean oil eventually ending up in one of the two clean oil tanks. The clean oil would then be transferred by pipeline to the Trans Mountain Pipeline Company terminal. CCS stated that the facility would also provide clean crude oil terminal services, and thus tanker trucks containing crude oil would also be accessing the facility.

CCS explained that waste waters from both the waste side and from custom treating would be pumped to the clarifier tanks. Sweet and sour produced water received directly via truck would also be off-loaded into separate tanks. The various waste water streams would eventually be flowlined to the proposed off-site disposal well, although some sweet produced water could be used in some parts of the facility's operations (e.g., tank/truck washing) to offset the volumes of fresh water required.

6.2.2 Views of the Interveners

The interveners stated that they were very concerned about the potential release of fugitive emissions during the acceptance and processing of wastes and other materials arising during the washing of tanks and trucks. They were concerned that offensive odours and health-harming compounds could reach their homes and impact their quality of life, their health, and the health of their livestock.

They were also concerned that the mismanagement of wastes or other materials could result in spills, which could cause contamination or result in other emergency scenarios, such as fires.

6.2.3 Views of the Board

The Board requires that oilfield waste be handled in such a manner that it does not

- produce fugitive air emissions or uncontrolled gases that exceed ambient air quality guidelines or result in off-lease odours,
- produce uncontrolled fumes or gases sufficient to pose a risk of fire or explosion, or
- threaten public health and safety or the environment.

The Board has examined the approaches proposed by CCS for the receipt and management of the various streams coming into the proposed facility and is comfortable that if carried out as proposed, they are adequate to ensure that public health and safety will be protected and that the

EUB's requirements will be met. The Board is also satisfied that CCS has taken the appropriate measures to ensure that proper handling of oilfield wastes stored at the site will occur.

The Board believes that control of fugitive emissions, particularly odourous emissions from the proposed facility, is essential for this location. The Board directs CCS to follow through on its commitments to combust vapours from waste and product tanks and to provide emissions controls for its tank wash facility.

6.3 Material Verification Procedures

6.3.1 Views of the Applicant

CCS stated that all truck tickets would be reviewed by CCS personnel prior to unloading to ensure that the material or waste was suitable for receipt and that it would be off-loaded in the appropriate part of the facility. Knowledge of the origin (location and type of production) of the material or waste would also be used to ensure that appropriate handling occurred. CCS explained that the generator (producer) was responsible for the characterization of the waste. CCS also stated that it would require a third-party lab analysis of the waste if the generator failed to characterize it, information pertaining to its origin was not available, and CCS had little corporate experience with the waste. CCS indicated that it worked closely with producers to help them to properly characterize their wastes.

CCS noted that while any emulsions or similar materials were being off-loaded from tank or vacuum trucks, three samples would normally be collected (one at the beginning of the off-load procedure, a second in the middle, and a third near the end) and then combined to form a composite sample. A portion of the composite sample would be spun down to determine its oil, water, and solids content and then the remainder of the sample would be retained for three to six months in case questions later arose as to the contents of the material.

When questioned as to whether naturally occurring radioactive materials (NORM) would be accepted at its proposed facility, CCS responded that they would not. CCS went on to explain that through its experience with the Unity Cavern, which was approved to accept NORM associated with crude oil production, its understanding was that NORM was generated from specific reservoirs but, to the best of its knowledge, not in reservoirs in the Edson area. CCS identified southwest Saskatchewan, Gull Lake, Swift Current, Kindersley, Provost, and northeastern British Columbia as areas that have been known to generate NORM. CCS stated that it did not intend to test for NORM at the West Edson facility, but would rely instead on the producers to test for these materials.

6.3.2 Views of the Interveners

The interveners were concerned that CCS's material acceptance and composition verification procedures relied heavily on information that would be provided by industry (the producers or generators) and truck drivers and not on direct knowledge of the materials by the waste management facility operators. They were also concerned about the potential for NORM to be accepted unknowingly and questioned why CCS had not planned to implement testing procedures that would alert CCS personnel and prevent the off-loading of NORM-contaminated products.

6.3.3 Views of the Board

The EUB requires oilfield waste generators to properly characterize their wastes and to include this information in associated documentation. The EUB also requires that oilfield waste receivers accept only wastes that the facility is approved to handle and to understand the capabilities and limitations of the treatment and disposal techniques being offered. The Board notes that CCS's application meets its requirements for material acceptance and verification procedures.

The Board can appreciate the public's concerns that significant onus is placed on the generators to characterize their wastes. However, the Board believes that this is in fact the appropriate place to put such an onus. Because these facilities receive numerous trucks every day from a number of
facilities, it is critical that the generators recognize that they have a significant obligation to properly characterize each stream.

The Board also notes that same characteristics that may make a waste of concern to the public (e.g., the presence of hydrogen sulphide [H_2S], high vapour pressure) are also characteristics that can, if unreported, place the workers at the waste management facility at risk. As a result, the concerns of the waste receiver with regard to the proper characterization of incoming wastes in order to prevent the development of unsafe working conditions are closely aligned with the concerns of the public, which may help to address local concerns.

The Board notes the discussions surrounding the occurrence of NORM in oilfield wastes. The Board acknowledges this issue and approximately three years ago established an EUB-chaired committee to look into the issue. The committee is expecting to have a draft report ready later this year that will provide information on the occurrence of NORM in the upstream petroleum industry and make recommendations on handling and management options for NORM.

6.4 Emergency Response Plan

6.4.1 Views of the Applicant

CCS committed to develop a detailed emergency response plan (ERP) prior to commencement of operations at the West Edson facility and committed to consult with affected parties before finalizing the ERP. In addition, CCS committed to develop a post-incident follow-up process whereby surrounding neighbours would be informed of incidents that occurred, how CCS had responded, the results of any investigative work, and any procedural changes precipitating from the investigation.

6.4.2 Views of the Interveners

The interveners expressed significant concern that CCS had not already developed a site-specific ERP for the proposed West Edson facility.

6.4.3 Views of the Board

The Board requires a corporate ERP to be maintained on the site of all oilfield waste

management facilities. The plan must describe appropriate measures to follow in the event of any emergency such as a fluid spill, tank fire, or any other hazard and identify appropriate phone numbers and contacts. The Board notes CCS's commitment to develop, with input from neighbours, an ERP for the West Edson facility in place of a corporate ERP. The Board believes that having such a plan in place prior to start-up is acceptable.

7 ENVIRONMENTAL IMPACTS

7.1 Atmospheric Emissions

7.1.1 Views of the Applicant

CCS acknowledged that the proposed facility would have several potential sources of atmospheric emissions and that to accurately model resulting air quality was challenging, due to the highly variable nature of the inlet waste stream and to the fact that its operations generated emissions on a short-term and intermittent basis. Therefore, for the purposes of air quality modelling, CCS stated that it assumed a worst-case scenario approach.

CCS first identified what it felt was the highest probable concentration of H_2S associated with the waste streams from the area that the facility would service. It assumed that this worst-case waste stream would be associated with every load being brought to the site. CCS then used the results of this modelling to modify its initial facility design and operating procedures in order to eliminate the possibility for exceedances of permissible air quality standards.

CCS identified the potential sources of emissions as
- vacuum truck offloading,
- tanker truck offloading,
- solids processing,
- tanker truck cleaning, and
- tank cleaning.

At the hearing, CCS committed to not accept onto its facility trucks that were improperly sealed or otherwise leaking vapours to the environment.

In addition, CCS noted that it had made a number of proposed modifications to the design and operation of the facility that would further reduce the risk of unacceptable emissions, including
- increasing the flare stack height to 30.6 m;
- draining all liquids out of the tanks prior to cleaning activities;
- screening of the vapour space of tanks and trucks for H_2S prior to cleaning, and if the concentration were higher than 300 parts per million (ppm), using an H_2S scavenger to reduce the level of concentration;
- using a high-pressure cold-water rinse to flush out residual solids and sludges prior to cleaning with a high-pressure hot-water stream;
- using a closed system to unload vacuum trucks; and
- using a vent scrubber for the tank wash area.

CCS noted that while there were a number of commercially available H_2S scavenger and deodorant products, it had not yet selected which product(s) would be employed at the West Edson facility. An H_2S monitor would, however, be installed at the effluent side of the H_2S scrubber to monitor when the scavenger or deodorant material was losing effectiveness and needed to be recharged.

CCS stated that it was committed to installing H_2S and lower explosive limit (LEL) meters within all buildings and at the top of the hopper and reiterated that the plant manager and operators would be on site every day. CCS stated that it did not intend to do any regular off-site monitoring for odours but was in the process of designing a corrective action plan that would be used to respond to any odour complaints.

CCS committed to implementing all of the proposed facility design and operational procedural modifications described at the hearing. CCS reiterated that the worst-case scenarios used in the modelling could be argued to be unreasonably high and that actual emissions might be several orders of magnitude lower.

7.1.2 Views of the Interveners

The interveners considered odours and emissions to be of major concern in regard to the proposed West Edson facility.

The Thebeaus were concerned that the tank storage area would be a source of emissions that was not accounted for in the CCS air quality monitoring. Mr. Thebeau was concerned about emissions from both tanks that had been cleaned and those that were waiting to be cleaned, and he expressed scepticism regarding the effectiveness of the cold-water wash proposed by CCS. He also expressed concerns about the cumulative effects of emissions from the proposed 7-18 facility, the Gibson facility, and other oil and gas activities in the area, as well as about emissions from the trucks bringing wastes to the facility.

The Buggs related that their granddaughter had asthma and they had correlated incidences of asthma attacks with emissions. The Buggs agreed that the proposed 30.6 m flare stack would decrease emission concentrations but argued that this would not alter the quantity of the emissions released, just spread them over a larger area. They also disagreed with CCS's evidence that the effects of short-term exposure were reversible.

The Buggs were also concerned that the deodorant CCS was planning to use would eliminate the offensive odours but not the harmful compounds associated with the emissions. They commented on CCS's commitment not to accept trucks that leak and wondered what the fate of those trucks would be. The Buggs were also sceptical about the proposed corrective action program that CCS proposed to implement at the facility and were worried that the only function that it would serve was to pacify the area residents.

The interveners noted the lack of direct screening of the waste streams by CCS and were sceptical about the reliability of trusting the truck operators to correctly identify the waste streams and so ensure that they were directed to the correct off-loading points. They observed

that a load containing high concentrations of H_2S vapour could be inadvertently unloaded at the open hopper, resulting in both significant odour incidents and a possible fire hazard.

7.1.3 Views of the Board

The Board notes that CCS has proposed to use closed systems for the West Edson facility, which will result in a significantly lower risk of fugitive emissions than from an open system design. The Board also notes that CCS has volunteered to add a number of other modifications to both plant design and operations to further reduce the risk of off-site odours and other emissions. The Board is prepared to accept that the modelling carried out by CCS is sufficiently conservative and that given this, plus the proposed emission control technologies, the risk of emissions is well within the acceptable limits for these facilities.

The Board does agree with the interveners that effective screening of the waste streams will be needed to ensure that only appropriate loads are disposed into the open hopper. The Board notes that CCS has proposed to unload liquids from vacuum trucks by way of a closed system, to screen each load for H_2S and volatile organic compound (VOC) vapours, and to utilize a H_2S scavenger material if vapours are above 300 ppm. All of the above will assist in the control and reduction of fugitive emissions from the facility.

As observed earlier in this report, the Board also notes that all waste management facility operators are highly motivated to ensure the proper unloading of waste streams at the appropriate point, since failing to do so can result in significant risks to worker safety. Therefore, the Board believes that CCS will be strongly motivated to ensure that all off-loading is done safely and appropriately.

The Board also shares the concerns of interveners regarding the risk of odours emitting from trucks travelling to and from the proposed CCS West Edson facility and, in particular, how any resulting odour complaints will be addressed. A condition of any approval of the application is the development of a proactive program for dealing with odour complaints, including odours originating from trucks travelling to and from the CCS facility. While CCS is clearly not responsible for such odours, the Board does expect CCS to investigate all odour complaints it receives and, if necessary, coordinate its investigation with the various trucking companies and with generators.

The Board also notes that CCS, as per *Guide* 60: *Upstream Petroleum Industry Flaring Guide*, must either measure or accurately estimate the volume of gas flared and maintain a log of flaring incidents and related complaints.

7.2 Groundwater

7.2.1 Views of the Applicant

CCS stated that it believed that its assessment of groundwater conditions at the site met the requirements of EUB *Guide 58: Oilfield Waste Requirements for the Upstream Petroleum Industry*. CCS maintained that moving the facility footprint north did not impact the validity of the assessment, as it was conducted for the entire parcel. In response to interveners' concerns

that CCS should have conducted an environmental impact assessment (EIA) at the facility, it stated that it did not believe an EIA was required for such a facility under either EUB or Alberta Environment (AENV) legislation.

CCS noted that its initial site assessment did not identify any groundwater immediately beneath the site, but that additional work more fully described the local groundwater regime. The site was described as sloping from north to south and being covered by thin surficial deposits of sand, glacial till, and clay, with sand predominating on the southern portion of the site and clay more prevalent to the north. The surficial deposits were underlain by highly permeable sandstone bedrock encountered at depths of between 0.3 and 4 m below ground level. Groundwater was encountered at depths of between 6 and 13 m. This shallow groundwater flows southward from beneath the site at an approximate rate of 125 m per year and discharges into Sundance Creek approximately 300 m to the south of the site. Based on this information, CCS recognized that the natural materials overlying much of the site would not prevent spills from entering the groundwater system and potentially impacting Sundance Creek. As such, CCS stated that it made extensive enhancements to the facility design to prevent any impact on either local groundwater or Sundance Creek.

With regard to potential impacts to regional groundwater, CSS noted that no water wells were present between its proposed facility and Sundance Creek. In response to an issue raised by the interveners, CCS also concluded that its operation could not impact the Edson buried channel aquifer system, which it estimated was located 3.2 km to the southeast.

CCS indicated that four groundwater-monitoring wells were already present on the site. However, CCS stated that groundwater conditions at the site warranted expansion of its groundwater monitoring network and that it intended to install additional monitoring wells to further assess background groundwater conditions, to monitor groundwater conditions down-gradient of each key component of the facility, and to monitor along the southern boundary of the site in order to assess the quality of groundwater leaving the site. CCS stated that it was locating its groundwater monitoring wells in such a way that they could, if necessary, also be used to intercept and recover impacted groundwater immediately. CCS also noted that it intended to perform a preconstruction audit to identify the location of pre-existing utility lines that might act as conduits for groundwater flow towards the creek.

CCS indicated that it intended to retain a third-party consultant to conduct quarterly groundwater sampling for those parameters listed in *Guide 58*, as well as monthly monitoring by CCS personnel of indicator parameters such as pH, electrical conductivity, chloride, combustible vapours, odour, and hydrocarbon sheen. CCS also proposed baseline sampling of Sundance Creek and adjacent domestic water wells and stated that additional sampling would be performed at the request of residents. The applicant indicated that all data collected would be reviewed by a third-party environmental consultant to assess whether an impact to groundwater had occurred. CCS noted that it was in the process of designing a corrective action plan that would be used to respond to any groundwater impact.

CCS stated that it preferred to use nonpotable rather than potable water for its operational purposes and so intended to investigate for deeper, poorer quality aquifers not used by area residents. The applicant also noted that it would consider using surface runoff water, rainwater

collected from the solids pad roof, and sweet produced water to diminish the need for fresh groundwater. CCS noted that AENV regulated the use of groundwater and would require evidence that any proposed groundwater withdrawal would not impact offset users. CCS indicated that it would obtain the appropriate permits from AENV for whichever source of water it used.

CCS concluded that the site offered little natural protection to the underlying unconfined bedrock aquifer. However, it believed that its proposed facility design would ensure that shallow groundwater and Sundance Creek were not impacted by its operations.

7.2.2 Views of the Interveners

All interveners stated that because of the risk to shallow groundwater and Sundance Creek, the facility should not be built at the proposed location. They suggested that due to the environmental sensitivity of the site, CCS should have conducted an EIA, and noted that *Guide 58* indicated that it was the applicant's responsibility to determine if an EIA was required. The interveners stated that CCS made its decision not to perform an EIA based on its initial site assessment report, which did not investigate the bedrock aquifer.

W.E.L.L. also expressed concern that the proposed CCS site could be located over the Edson Buried Valley system, which is an important source of groundwater locally.

The interveners were also concerned that while CCS indicated that the Sundance Creek is approximately 300 m from the site, it neglected to assess the potential for contaminating groundwater in the marsh area between the creek and the proposed site.

The interveners did not comment on CCS's proposed groundwater monitoring program for the site, but were concerned that CCS had not identified sewer and utility lines from the previous housing development, which might act as conduits for rapid migration of contaminated groundwater to Sundance Creek. The Thebeaus indicated that it was their understanding that the housing complex received its water through a pipeline from wells on the Trans Mountain site.

W.E.L.L. was concerned that CCS planned to use groundwater for process water and that groundwater withdrawal at this site could impact offset domestic water wells.

The interveners stated that due to the vulnerability of the shallow aquifer, they did not believe the site was a suitable location for an oilfield waste facility, regardless of the design of the facility.

7.2.3 Views of the Board

The Board agrees with both the applicant and the interveners that the proposed site does not afford adequate natural protection to the underlying sandstone aquifer and, as a result, any uncontained spills on the site could impact both local groundwater and eventually Sundance Creek. Based on the information presented by the applicant and the interveners, the Board is convinced that the permeability of the native material is sufficiently high that it may not be possible to recover spilled material quickly enough to prevent at least a portion of a spill from

moving into local groundwater. Therefore, the facility design must eliminate the possibility of any spilled material contacting the natural ground surface. As well, CCS must have a plan in place to immediately contain and recover spilled material.

To meet these requirements, the Board requires the following conditions to its approval:

1) The facility design must contain all spilled fluids and precipitation within the active footprint of the facility, thus preventing them from entering the surface water run-off/run-on collection system. The design must also be enhanced such that the entire site will be lined with a compacted clay liner, the entire drainage ditch will be lined with a synthetic liner, and the dirty/cleaned tank storage area will have a containment system consisting of a synthetic liner underlying a concrete slab with an associated leak detection system.

2) Monitoring wells down gradient of the key facility components and along the southern perimeter of the site must be tested for indicator parameters on a monthly basis.

3) The applicant must report back to the EUB on site conditions once the initial site preparation is complete.

4) The applicant must report back to the EUB with a quality assurance report on the cut and fill of the site, stability of the site, and installation of clay liner and synthetic liner.

5) The applicant must develop and submit to the EUB a plan to immediately contain and recover spilled material.

7.3 Noise

7.3.1 Views of the Applicant

CCS identified the following noise sources at the proposed facility:

- one steam boiler inside the boiler building,
- one steam boiler exhaust stack,
- one unload pump inside each unload station building (two in total),
- 16 pumps and one air compressor inside the pump building,
- one treater burner,
- two pumps inside the injector pump building,
- one hopper mixer above the receiver hopper,
- one motor/auger above each GCS tank (two in total),
- one solids pad sump pump, and
- a vibrator operating to help clean out a vacuum truck (operating five times a day for 30 seconds each time).

CCS also identified that a total of 40 trucks would arrive and leave from the proposed West Edson facility per day and that 90 per cent of that traffic would be during the day.

CCS submitted a noise impact assessment (NIA) to demonstrate that the proposed facility would be in compliance with the EUB's *Interim Directive (ID) 99-8: Noise Control Directive*. In addition to modelling predicted noise contributions from the proposed facility, existing noise

levels were measured at four nearby residences on September 5 and 6, 2001. The four residences were the Thebeaus', the Buggs', the Chapmans', and the Crawfords'.

CCS submitted that the NIA indicated that the facility would be in compliance with *ID 99-8* with a safety margin of between 1 and 3 decibels (dBA) for the nighttime noise levels at the four residences and approximately 3 dBA for the daytime noise levels. CCS also contended that by assuming that the vacuum trucks would be operating five times each day and two times each night, the NIA was conservative, since due to the nature of the waste streams received and the availability of high-pressure washers on site, vacuum truck vibrators would not be needed. Other conservative assumptions used in the modelling included having 40 trucks approach the proposed facility from the west and 40 trucks from the east. This, CCS argued, was conservative by as much as 3 dBA, as this was double the number of trucks expected per day at the facility.

In response to questions presented by some of the interveners, CCS conceded that the backup alarms on the trucks were not taken into account in the NIA; however, CCS believed that with the closest resident over 1 km away from the facility, the alarms should not be an annoyance.

CCS stated that construction noise was also considered and noted that there are currently no construction noise standards in Alberta. However, CCS pointed out that the Nova Scotia Department of the Environment had such standards and that its predicted construction noise levels were within these.

CCS committed to conducting a second noise survey of the area residences after the proposed facility was constructed, as well as whenever a noise complaint that could not be satisfactorily addressed was received.

7.3.2 Views of the Interveners

The interveners had several concerns with how the noise survey was conducted, what was included/excluded, and how the results of the assessment accounted for sounds that were different from the existing noise environment.

The interveners pointed to a number of traffic- and truck-associated noises of concern, including the sound of trucks gearing down and turning onto Trans Mountain road and into the subject site, and the sound of engine retarder brakes, truck backup alarms, and vacuum truck vibrators. These, they noted, are all distinct sounds that are very rare or nonexistent in the current sound environment and would be present if the facility were to be approved. Furthermore, the intermittent and unusual nature of these noises would be a source of annoyance that would impact the interveners' quiet enjoyment of their land.

Mr. Thebeau identified, from personal experience in the oil and gas industry, that "low-level noise" from treaters and boilers had caused significant noise, especially at night. Mr. Thebeau was not satisfied that the CCS NIA adequately addressed this concern. Although Mr. Thebeau believed that the NIA was conducted in good faith, he was also concerned that engine retarder brake noise and noise from possible future facility expansion, in addition to the "low-level noise" sources, were not taken into consideration during the study. He also noted that Mr. Thompson lives closer to both the highway and the proposed facility, yet his residence was not

included in the noise survey. Mrs. Thebeau felt that, since the noise survey was done close to or on a holiday weekend, the survey results were higher than normal and not indicative of normal sound levels at their residence.

Mr. Knutson questioned the modelling of the truck noises, since in the model trucks are assumed to arrive at random times throughout the day and night. However, Mr. Knutson said that he was told by CCS that traffic would tend to be concentrated between 10:00 a.m. and noon and between 4:00 p.m. and 6:00 p.m. He wondered how this would impact the predicted noise levels.

Mrs. Crawford reiterated that unusual noises, such as trucks slowing down to turn, would be audible over any other noises at the same time. Mrs. Bugg also reiterated that trucks changing speed would stand out in the residents' current noise environment, which was not accounted for in the CCS NIA.

Mrs. Bugg was also concerned about the averaging of noise over time and the impact the concentration of truck traffic at discrete times during the day would have on the noise levels. She questioned how noises such as tanks being dropped off a truck, basically a very loud and essentially instantaneous noise, could effectively be averaged over the period of one minute. Mrs. Bugg believed that averaging would significantly reduce the effective noise level to the level of background noise.

7.3.3 Views of the Board

The Board notes that the NIA submitted by CCS indicates that the proposed facility would be in compliance with *ID 99-8* with a margin of safety. The Board also notes that CCS has committed to conduct a second noise survey of the area residences if a complaint that cannot be satisfactorily addressed is received.

With respect to points that the interveners have made, the Board does understand the public's concern that loud or unusual noises can significantly disturb the quiet enjoyment of a property. The Board agrees that trucks gearing down, engine retarder brakes, truck backup alarms, vibrating vacuum trucks, and sharp noises, such as those caused by unloading tanks, can be distinctly heard over the background noise. However, such noises are commonly associated with many forms of new development in an area. In this case, the Board notes that in fact there is already significant industrial development along the Trans Mountain road and associated truck and other traffic. Furthermore, the site is proximal to Highway 16. In general, the Board believes that the incremental increase in noise in the region is consistent with the general increase in industrial activity associated with a growing economy and population base.

When weighing the two views expressed in this regard, the Board believes that CCS's application is consistent with both the spirit and the intent of the EUB's requirements for noise control. Furthermore, the Board believes that CCS has demonstrated that this facility can be constructed and operated within the established noise threshold limits.

At the same time, the Board recognizes that conducting an NIA does not guarantee that the facility will be operated within the permissible sound limits. Each noise complaint related to a facility must be judged on its own merits, and even if a facility is found to be in compliance,

further remedial action may be enforced by the EUB if it is felt that the increase in noise is contrary to the public interest. In order to better ensure that in fact noise levels are as predicted, the Board expects CCS to follow through with its commitment to conduct a second noise survey after the facility is fully operational at a time acceptable to the Board.

7.4 Fish and Wildlife

7.4.1 Views of the Applicant

Although CCS presented two environmental site assessments for the proposed facility, neither included any fisheries or wildlife studies. CCS did, however, commit to do some baseline water quality assessments of Sundance Creek and to install leak detection systems to help protect the environment and associated fish and wildlife against possible contaminants.

7.4.2 Views of the Interveners

Several members of W.E.L.L. described Sundance Creek and surrounding area as an area abundant with fish and wildlife, including, but not limited to, a native grayling population, deer, elk, moose, beavers, otters, ducks, sandhill cranes, blue herons, and swans. W.E.L.L. expressed a general concern regarding any possible contamination of the environment and the associated impacts on wildlife as a result of the construction and operation of the proposed 7-18 facility.

7.4.3 Views of the Board

The Board notes that although the environmental site assessments submitted by CCS did not include a fish and wildlife impact assessment, it did take into consideration groundwater protection, which would appear to represent the greatest risk to these species. The Board is satisfied that the conditions set out in this report are sufficient to ensure that both the environment and the fish and wildlife it supports are adequately protected.

8 TRAFFIC

8.1 Views of the Applicant

CCS acknowledged that while many of the residents in the area had concerns regarding increased traffic, in general the site had few, if any, access problems. CCS noted that the site already had a paved service road off a major four-lane highway with all-direction access. CCS noted that the 11.5 acre site was more than sufficient to accommodate the safe movement of trucks, since about 5 acres were needed for plant equipment and another 5 acres for the safe access and egress of trucks.

CCS estimated that approximately 40 trucks per day would access the facility. However, the overall volume of truck traffic through the town of Edson would decrease, as 89 per cent of the oilfield waste it expected to receive would be generated to the west of the proposed 7-18 facility. Some traffic would still travel through Edson in order to haul produced water to the East Edson

facility, and other trucks would be required to haul materials to either landfill site and/or cavern disposal. CCS estimated that about 12 to 14 trucks a week would travel through Edson. CCS noted that of particular concern to residents was a dip in the road just before a stop sign at the intersection of the local road running south with the Trans Mountain road. CCS stated that safety of the residents coming from the north onto the Trans Mountain road had always been a concern and committed to address the intersection with the County and to work with the County to remedy the situation.

CCS committed to offer facility orientation and safety awareness training with the truck drivers before the proposed 7-18 facility would open and also to conduct ongoing programs with the truck drivers.

8.2 Views of the Interveners

W.E.L.L. expressed concern regarding truck traffic and stated that there is a real danger in increasing the number of tanker trucks beyond what is already going to the Trans Mountain and Gibson's sites. It questioned whether there could be safe access and egress of trucks coming onto and leaving the facility as it felt the access to the site was too narrow for such a facility. With regards to the junction of the local road with the Trans Mountain road, the residents expressed concern that during slippery conditions they have to take a run up the slope to proceed and were concerned that an accident may occur with one of the additional trucks that would now be proceeding through the intersection. In particular, they expressed concern for the safety of children that ride the school bus which stops at this intersection. They also expressed concern that the County may not fully cooperate and work with CCS to have the low point in the road fixed.

8.3 Views of the Board

The Board acknowledges the area residents' concerns about the increased truck traffic on the roads around the proposed 7-18 facility. It also recognizes that a particular concern to area residents was a dip in the road just before a stop sign at the intersection of the local road running south and the Trans Mountain road. The Board expects CCS to follow through with its commitment to address the intersection with the County and work with the County to remedy the situation. It also expects CCS to follow through with its commitment to offer facility orientation and safety awareness program for the truck drivers before the proposed 7-18 facility is opened and conduct ongoing safety programs with the truck drivers.

9 DISPOSAL SCHEME

CCS applied for an approval to dispose of class 1b fluids generated by the facility at the proposed well with a bottomhole location of 2/9-17-53-19W5M. The interveners did not question the need for the disposal well. The Board will approve the disposal scheme subject to the drilling and evaluation of the well and all the wellbore integrity requirements (as in *Guide 51: Injection and Disposal Wells*) being met.

10 PUBLIC CONSULTATION

10.1 Views of the Applicant

CCS submitted that its public consultation efforts had been extensive, including several mail-outs of information packages and project updates, letters to area residents addressing concerns, several private meetings, and two open houses. CCS noted that although it had invited the general public to a tour of a new standard facility, no one from the community had accepted the offer.

CCS stated that it had focused its public consultation program on residents within a 2 km radius from the proposed facility, but at no time restricted consultations with public outside of that radius. Feedback from residents was encouraged to help improve the proposed facility and reduce any potential impacts.

CCS explained that it had attempted to resolve outstanding concerns through private meetings with each objector. CCS stated that it recognized that the location of the proposed 7-18 facility was the focus of considerable discussion and probably the cause of much of the opposition. CCS noted that it had provided details of the EUB's Appropriate Dispute Resolution (ADR) program to the community residents in the hope of resolving their concerns with the project. However, the objectors rejected the proposed ADR process, stating that since their concerns ultimately stemmed from the proposed location of the facility, ADR would not be helpful in mediating a solution.

CCS said that it had adopted a new complaint reporting form to track complaints. The area manager would be responsible for ensuring that a complaint was followed through to completion and the satisfaction of all the interested parties. CCS committed to implement the complaint system at the proposed facility.

10.2 Views of the Interveners

W.E.L.L. contended that CCS's public consultation program was simply designed to inform the residents of their plans and not to actually deal with their concerns. W.E.L.L. explained how the community became uneasy with the proposed facility following several changes made to the project and as a result of not knowing exactly what was being proposed. W.E.L.L. acknowledged that they became upset when it became apparent that CCS was not going to change its mind about the location of the proposed facility. W.E.L.L. members felt that CCS tried to convince them that the selected site, which it had already purchased, was appropriate, rather than initiating a meaningful dialogue in terms of other possible locations.

W.E.L.L. members explained that they could not go to see other CCS facilities, as offered by CCS, as they were all working people who did not have the time or capacity of leaving their jobs for the convenience of CCS.

10.3 Views of the Board

The Board believes that CCS's attempts to consult with the public, although well intentioned, failed to promote a sense of security or trust. In the Board's view, much of CCS's efforts to consult with residents were interpreted negatively when residents determined that CCS had already purchased the proposed site. This in turn led to the view that there would be little opportunity for meaningful dialogue, since the company was already committed to a single position. The Board expects applicants to discuss potential sites with area residents so that, to the extent possible, concerns can be addressed or incorporated into the final site selection process.

The Board can accept that there may have been economic or operational advantages to CCS in securing the proposed site early in its process of dialoguing with area residents. This is a common occurrence as industry tries to match business needs with the needs for public consultation. However, this approach can also lead to a potential lack of trust and a breakdown in relations with the community.

The Board does accept that CCS is prepared to continue to work closely with area residents and is willing to provide its assistance in the re-establishment of positive community relations.

Dated at Calgary, Alberta, on June 7, 2002.

ALBERTA ENERGY AND UTILITIES BOARD

<Original signed by>

B. F. Bietz, Ph.D., P.Biol.
Board Member

<Original signed by>

J. R. Nichol, P.Eng.
Board Member

<Original signed by>

J. B. Railton, Ph.D., P.Biol.
Acting Board Member

APPENDIX TO DECISION 2002-055

SUMMARY OF THE APPLICANT'S COMMITMENTS AND CONDITIONS

Commitments

The Board notes that throughout the proceeding, CCS undertook to conduct certain activities in connection with the proposed project that are not strictly required by the EUB's regulations or guidelines. These undertakings are described as commitments and are summarized below. It is the Board's view that when companies make commitments of this nature, they have satisfied themselves that the activities will benefit both the project and the public, and the Board takes these commitments into account when arriving at its decision. The EUB expects the applicant, having made the commitments, to fully carry out the undertakings or advise the EUB if, for whatever reasons, it cannot fulfill a commitment. It is at that time that the EUB will assess whether the circumstances of the failed commitments may be sufficient to trigger a review of the original approval. The affected party also has the right to ask the EUB to review an approval if commitments made by an applicant remain unfulfilled.

CCS committed to the following during the course of the proceeding:

1) placement of monitoring wells down gradient of key facility components and along the southern boundary of the site;
2) baseline testing of Sundance Creek;
3) follow-up testing of Sundance Creek on a complaint basis;
4) baseline testing of W.E.L.L.'s wells;
5) follow-up testing of W.E.L.L.'s wells on a complaint basis;
6) implementation of a noise, odour, and general complaint system and complaint log;
7) adoption of recommendations contained in the Gartner Lee report;
8) conducting a postconstruction noise survey;
9) installation of H_2S and LEL meters within all buildings and at the top of the hopper; and
10) not accepting at the facility any trucks that are improperly sealed or otherwise leaking vapours to the environment.

Conditions

Conditions, generally speaking, are requirements in addition to or otherwise expanding upon existing regulations and guidelines. An applicant must comply with conditions or it is in breach of its approval and subject to enforcement action by the EUB. Enforcement of an approval includes enforcement of the conditions attached to the approval. Sanctions imposed for breach of such conditions may include the suspension of the approval, resulting in the shut-in of a facility.

CCS is required to fulfill the following conditions:

1) The facility design must contain all spilled fluids and precipitation within the active footprint of the facility, thus preventing them from entering the surface water run-off/run-on collection system. The design must also be enhanced such that the entire site will be lined with compacted clay liner (constructed to the specifications outlined in Section 13.1 of *Guide 55*), the entire drainage ditch will be lined with a synthetic liner, and the dirty/cleaned tank storage area will have a containment system consisting of a synthetic liner underlying a concrete slab with an associated leak detection system (constructed to the specifications outlined in Section 9 of *Guide 55*).

2) Monitoring wells down gradient of the key facility components and along the southern perimeter of the site must be tested for indicator parameters on a monthly basis.

3) CCS must report back to the EUB on the site conditions once the initial site preparation is complete.

4) CCS must report back to the EUB with a quality assurance report on the cut and fill of the site, stability of the site, and installation of clay liner and synthetic liners.

5) CCS must develop and submit to the EUB a plan to immediately contain and recover spilled material.

6) CCS must combust vapours from waste and product tanks and provide emissions controls for the tank wash facility.

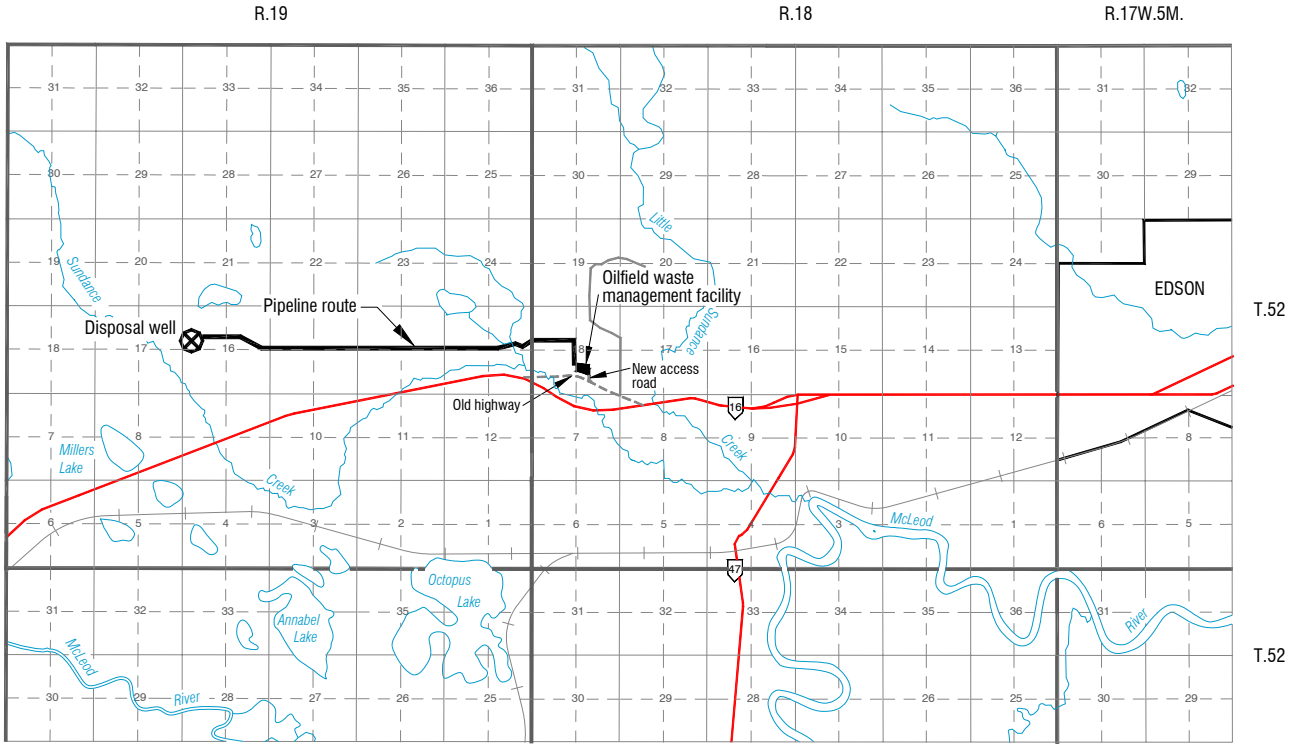

Figure 1. Location of Facility, Disposal Well, and Pipeline Route

Applications No. 2000343, 1242258, 1096927, 1096321

Canadian Crude Separators Inc.

Decision 2002-055

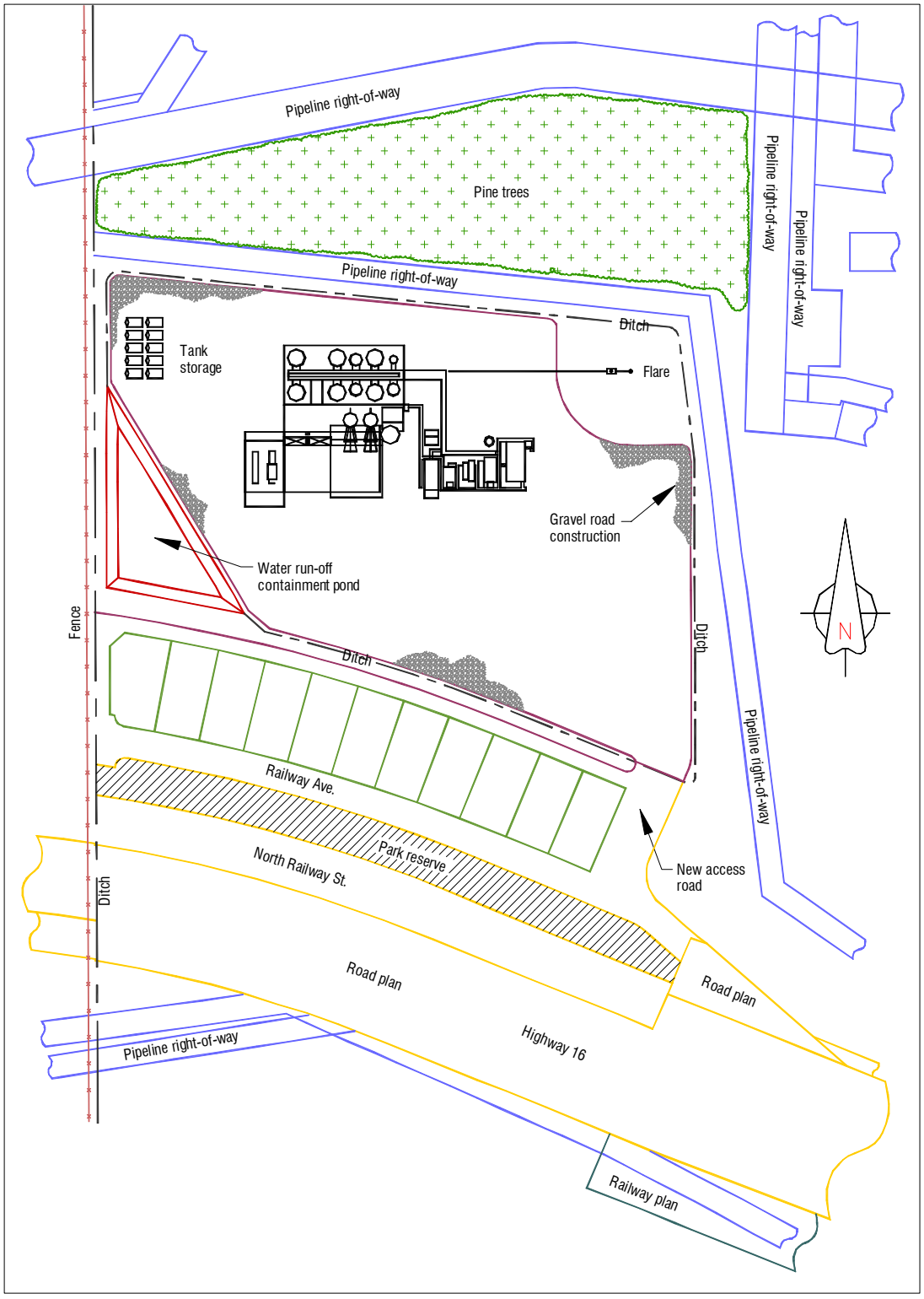

Figure 2. Oilfield Waste Management Facility

Applications No. 2000343, 1242258, 1096927, 1096321
Canadian Crude Separators Inc.

Decision 2002-055