

OFFICE OF GENERAL COUNSEL

OIL & GAS DOCKET NO. 01-0273133

THE APPLICATION OF CCS MIDSTREAM SERVICES, LLC FOR A PERMIT PURSUANT TO STATEWIDE RULES 8 AND 57 TO OPERATE THE LOS ANGELES TRD FACILITY, A COMMERCIAL STATIONARY TREATMENT FACILITY AND ASSOCIATED RECEIVING AND DISPOSAL PITS, LA SALLE COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner
James M. Doherty - Legal Examiner

APPEARANCES:

REPRESENTING:

APPLICANT:

Clay Nance
Jay Stewart
Scott Herbst
Enrique M. Proano
Doyon Main
Mitchell Zimmerman

CCS Midstream Services, LLC

PROTESTANTS:

Elizabeth R. Martin

Margaret Ann Jarrett
MAK Ranch, LP
Jill Martin

Cesar Garcia
Carl J. Collazo

Cesar A. Garcia Family Trust

Raymond and Rebecca Jenkins

Selves

PROCEDURAL HISTORY

Application Filed:	March 18, 2011
Protest Received:	March 29, 2011
Request for Hearing:	April 15, 2011
Notice of Hearing:	November 7, 2011
Hearing Held:	January 17, 2012
Transcript Received:	January 31, 2012
Proposal for Decision Issued:	February 15, 2012

EXAMINERS' REPORT AND PROPOSAL FOR DECISION**STATEMENT OF THE CASE**

CCS Midstream Services, LLC ("CCS") requests authority to operate a commercial stationary treatment facility containing a concrete receiving pit ("Receiving Pit") and a disposal pit ("Landfill Pit #1") at its Los Angeles TRD Facility. The proposed Los Angeles TRD Facility will be located in the Eagle Ford development trend and will provide services to operators in the area. The Receiving Pit will be used to receive and process waste and Landfill Pit #1 will be used to dispose of the solid oil and gas wastes, primarily consisting of oil based and water based drilling fluids, drill cuttings and production tank bottoms.

Notice of the subject application was published in the *Frio-Nueces Current*, a newspaper of general circulation in La Salle County, on March 24 and March 31, 2011. On March 18, 2011, notice of the application was sent to the surface owners of each tract which adjoins the facility tract, as shown on county property records and tax records of the La Salle County Central Appraisal District.

The application is protested by several surface owners adjacent to the tract on which the proposed facility and pits are to be located.

DISCUSSION OF THE EVIDENCE**Applicant's Evidence**

The proposed commercial Los Angeles TRD Facility will be located on a 735 acre tract, adjacent and north of State Highway 97, and located approximately 15 miles east of the town of Cotulla, Texas. FM 469 runs adjacent to the northwest edge of the proposed facility tract. Access to the proposed facility will be off of El Jardin Road which runs along the northern boundary of the 735 acre tract and intersects FM 469 (See attached CCS Figures 1-2 and 1-3: Site Plans). The site location was chosen, in part, because it is near the Eagle Ford trend development area and is easily accessible off of FM 469. The site's easy access to FM 469 will minimize truck traffic on rural roads, thereby increasing safety and reducing rural road maintenance. CCS stated that there were no other facilities of this type located in La Salle County.

The 735 acre tract is owned by CCS, which is a subsidiary of a large Canadian company with 25 years of technical expertise in oil and gas waste management. CCS has 70 separate oil & gas waste operations throughout North America, including Texas, Louisiana, North Dakota, Pennsylvania and Canada. The company has a capitalization of \$3.3 billion and 4,000 employees.

The surface soils consist of a sandy clay and clay layers on top of a thick impervious shale layer. CCS submitted surface boring logs from four wells on the proposed facility site. The sandy clay layer occurs on the surface and is approximately 20 feet thick. The sandy clay layer is underlain by a clay layer that is 10 to 40 feet thick. The impervious

shale layer occurs down to the top of the Yegua-Jackson aquifer and is approximately 200 feet thick. The location of the facility does not have any wetlands or water courses and it is not within the 100 year flood plain. The average annual rainfall in the area is 25.6 inches and the average evaporation loss is 56.1 inches.

There is one existing water well on the 735 acre proposed facility tract and five water wells within 1 mile of the proposed facility site. Groundwater use in this area is typically from the Carrizo-Wilcox aquifer, which is the major aquifer serving the area. The Carrizo-Wilcox is found at a depth of approximately 2,500 feet, where three of the water wells in the area are completed. The shallowest fresh water is located in the Yegua-Jackson aquifer at an average depth of 240 feet, where the three remaining water wells in the area are completed. Since there is no groundwater within 100 feet of the surface and Landfill Pit #1 has a double lined leak detection system, no groundwater monitoring wells are required.

The primary types of wastes received at the Los Angeles TRD Facility will be either liquid wastes (e.g. spent drilling mud) which are expected to be approximately 80% liquid and 20% solids or solid wastes (e.g. drill cuttings) which will be 80% solids and 20% liquids. Liquid wastes will be received at the site in vacuum trucks which will unload at one of four Receiving Bays in the Treatment Facility Receiving Pit. The pit is a concrete pit that measures 125 feet by 115 feet and will have a capacity of 8,000 barrels. The Receiving Pit will have a concrete base pad. The pit slab will be sloped from near the finished grade surface at the southern end to approximately 10 feet lower at the northern end. The eastern and western sides of the Receiving Pit will be surrounded by a concrete wall. Trucks will be able to unload wet wastes at the southern edge of the Receiving Pit. The Receiving Pit will be used to separate and collect liquids from the wet solid wastes. The Receiving Pit will be used only to manage wastes and will not be used for the ultimate disposal or burial of wastes.

Liquids collected in the Receiving Pit will be pumped to above-grade tanks or to the Process Area for further processing. The Receiving Pit pumps will maintain a liquid level with a minimum two feet of freeboard. The Process Area contains equipment used to further process liquids by removing solids to prepare liquids for disposal offsite. The equipment includes a shaker, tanks, two centrifuges with catch tanks, polymer and acid tanks, mix tanks and a containment sump for wash downs and spills. Liquids processed in the centrifuges ("centrate") will be stored in the centrate tanks until they can be trucked off-site to existing commercial disposal facilities in the area. Incidental oil will also be reclaimed and sold.

Wet solids received at the site will be placed onto the Process Solids Slab. Solids from the Process Area will also be placed on the Process Solids Slab. The Process Solids Slab will be a concrete slab approximately 40,000 square feet in size and will drain into the Receiving Pit. Delivered dry solids and dry solids from the Process Solids Slab will be placed on the Drying Pad. The Drying Pad will be an approximately 2-acre area that is graded to a catchment area located on its west corner. The Drying Pad will be lined with a 3 foot thick compacted clay layer, and a 12 inch thick soil protection layer. Any liquids drained from the substantially dry solids and precipitation will be collected in the catchment

area. Liquids collected in the catchment area will be pumped into the Receiving Pit or pumped into the Process Area for treatment. A perimeter berm will be placed around the Drying Pad to prevent storm water from leaving or entering the pit. Periodically, the substantially dry solids may be stabilized on the Drying Pad using lime, fly ash, cement or sawdust, if necessary, so the material will have sufficient bearing capacity to be placed in Landfill Pit #1.

The Landfill Pit #1 is a commercial solid waste landfill pit measuring 550 feet by 550 feet and will have a capacity of approximately 1,000,000 barrels. Landfill Pit #1 will be a state of the art disposal pit with a double high density polyurethane ("HDPE") liner, leachate collection and leak detection system. The base of Landfill Pit #1 will be built on top of an impervious shale layer. The shale layer will provide a natural barrier at the bottom of the Landfill Pit #1. After excavation of Pit # 1, the entire pit will be lined with a compacted clay barrier supported by the natural impervious shale layer. CCS chose the site in part because of the existence of the impervious shale layer. On top of the compacted clay barrier will be a secondary HDPE 60 mil liner, which will serve as the secondary liner. On top of the 60 mil HDPE secondary liner, a leak detection drain will be installed, which will consist of a geo-composite membrane that contains a non-woven synthetic resin filter that allows liquids to flow through it without plugging. Any leachate that reaches the geo-composite membrane will flow to a gravel filled leak detection trench. Liquids collected in the leak detection sump will be pumped to the leachate removal sump, measured, and then pumped to the centrate tanks for hauling to disposal. Over the leak detection drain will be a 60 mil HDPE primary liner. The 60 mil HDPE liner will be the primary liner for the pit. The liners will be anchored in place completely around each pit with an anchor trench filled with soil. On top of the 60 mil HDPE primary liner, a leak detection drain will be installed, which will consist of another geo-composite membrane. Over the second leachate collection geo-composite liner, a 12-inch cushion layer of fine soil will be placed to protect the liners from the heavy equipment used in the pit. A two foot layer of waste will be used as an interior access road fill. This will allow added protection of the waste and liners from daily travel of heavy equipment in the pit.

Waste disposal is currently projected to fill the Landfill Pit #1 at a rate of 600,000 barrels per year. The rate is highly dependent on drilling activity and market conditions. The Landfill Pit #1 is expected to be filled in 1.7 years. Additional space is available on the 735 acre site to expand the pit. This will require subsequent permit amendments and permit applications to expand or add more pits. The Receiving Pit will have a capacity of 3,714 barrels of waste. Solid waste will be routinely removed from the Receiving Pit and placed in Landfill Pit #1 for disposal. Accumulation of waste in the Receiving Pit is not expected. The permit application is for the initial 5-year period of operation of the Los Angeles TRD Stationary Treatment Facility. CCS will submit permit amendments and permit applications to extend the permit until CCS chooses to close the Los Angeles TRD site. CCS will construct the Treatment Facility Receiving Pit and other Waste Treatment Facility Area components for an expected project life of 25 years.

Landfill Pit #1 will be closed after waste reaches a level in the pit that provides 2 feet of freeboard or if waste is no longer being accepted. The leachate collection system will remove liquids and the waste will be solidified with stabilizing agents, if necessary. A pit

cap will be placed over the Landfill Pit #1 at closure. The pit cap will have fill placed above the waste to fill-in and slope the cap. A 6-inch layer of fine soil will go over the cap fill. A 40-mil HDPE liner cap will be placed over the fine soil and a 12-inch layer of fine soil will be placed over the liner to protect it. Above the fine soil layer will be a 6-inch layer of topsoil to allow the growth of a vegetative cover. The cap is designed to entomb the waste, prevent the infiltration of rain water and provide long term waste burial. The estimated closure cost for the Landfill Pit #1, assuming the that the entire surface of Landfill Pit #1 will be covered with the cap, is \$495,000.

The Waste Treatment Facility, including the Receiving Pit, will be closed by processing and removing the remaining waste, removing the remaining equipment, excavating and disposing of any affected material and performing confirmation sampling. The total cost to close the Treatment Facility, Receiving Pit and Landfill Pit #1, is estimated to be \$1,254,000. Financial assurance for the facility closure costs will be required prior to beginning any construction.

Protestants' Evidence

The application is protested by several surface owners adjacent to the tract on which the proposed facility and pits are located. The protestants are primarily concerned that the proposed facility will contaminate their groundwater and that a surface spill could run-off and contaminate their property. They are also concerned that noise, dust and fumes from the facility will affect their quality of life and property values. They believe that there are more remote areas in La Salle County in which this facility could be located. However, Mr. Garcia acknowledged that he had recently leased his property for oil and gas drilling and also stated that he had two commercial disposal wells located on his property.

Margaret Ann Jarratt, MAK Ranch, L.P. ("MAK"), and Jill Martin did not present evidence, but their attorney, Elizabeth R. Martin, objected to proceeding with the hearing on the application based on an alleged failure of notice, and cross-examined applicant's witnesses. Ms. Martin alleged that Margaret Ann Jarratt, a partner in MAK, had informed her the week before the hearing that she had conveyed an interest in a tract adjacent to the applicant's facility tract to MAK, in 2005 according to Ms. Martin's recollection. A copy of the application and the notice of hearing were sent to Ms. Jarratt, but not to MAK. Ms. Martin objected to going forward with the hearing because of this alleged failure of notice to MAK.

On September 1, 2011, the Commission's Technical Permitting Section sent CCS a letter stating that to complete the application, CCS was required to submit to Technical Permitting a Material Safety Data Sheet ("MSDS") for all chemicals used in the treatment process. A copy of Technical Permitting's letter requesting the MSDS was sent to Elizabeth R. Martin, Margaret Ann Jarratt, Cesar A. Garcia, Trustee, and Raymond and Rebecca Jenkins, but not to Jill Martin who had not protested the application as of September 1, 2011. By letter dated September 9, 2011, CCS submitted to Technical Permitting the MSDS that had been requested, but apparently did not send a copy to the protestants. Elizabeth R. Martin obtained a copy of the MSDS in October, 2011, as a result of an open records request to the Railroad Commission. Ms. Martin objected to going

forward with the hearing based on her contention that the notice requirement in Statewide Rule 8 required CCS to send the complete application to surface owners of tracts adjacent to the CCS facility tract.

EXAMINERS' OPINION

The examiners address preliminarily the objection made by protestants Margaret Ann Jarratt, MAK Ranch, LP, and Jill Martin that the hearing should not go forward because of a failure of notice. This objection was overruled by ruling of the legal examiner at the hearing, and this ruling is here affirmed.

Protestants' first objection is that MAK Ranch, L.P. was not served with a copy of the application or the notice of hearing. However, protestants presented no testimony or other evidence to establish that MAK was entitled to notice, that is, that at the time of filing of the application, MAK was the surface owner of a tract adjacent to the CCS facility tract. The only evidence in the record on this point is to the contrary. CCS presented evidence that staff of Environmental Resources Management ("ERM") was directed to research property records of the County Clerk and tax records of the La Salle County Central Appraisal District to determine the names and addresses of surface owners of all tracts adjacent to the CCS facility tract for the purpose of giving notice. An ERM engineer testified that this research was conducted by a qualified member of ERM's staff, and the records researched did not show that MAK was an offset surface owner. A copy of the CCS application was sent to all surface owners of adjacent tracts on March 18, 2011, the same day the application was filed with the Railroad Commission. In addition, notice of the application was published in the Frio-Nueces Current, a newspaper of general circulation in La Salle County.

CCS complied with the notice requirement of Statewide Rule 8 by mailing a copy of its application to surface owners of all adjacent tracts on March 18, 2011, and by causing notice to be published in a newspaper of general circulation in La Salle county. The examiners believe that when CCS filed the MSDS with Technical Permitting about six months later, it should have sent a copy to all protestants, because §1.48 of the Commission's General Rules of Practice and Procedure requires that a copy of any pleading or document filed in a protested contested case shall be served on every other party of record at the time of filing. However, the examiners have concluded that the failure of CCS to send a copy of the MSDS to protestants was a procedural error or mistake rather than a failure of notice. Protestants had already received notice of the application and filed protests and had an opportunity to obtain the MSDS and any other supplementary information that CCS might have filed from the Commission's files. In fact, Ms. Martin did this in October 2011, some three months before the hearing in this matter.

MAK, Jarratt, and Jill Martin appeared at the hearing and participated fully through their attorney Elizabeth R. Martin, as is evident from Ms. Martin's cross-examination of applicant's witnesses at pages 80-99, 137-140, and 159-168 of the Transcript. Jarratt and Martin received Rule 8 notice of the application, when a copy of the application was mailed to them in March 2011. MAK had actual notice of the application, because Jarratt is a partner in MAK. Protestants waited until the morning of the hearing to raise their notice objection, after CCS, its attorneys, and witnesses had gathered for the hearing.

Protestants had not previously requested a continuance of the hearing based on the alleged notice deficiency. At the beginning of the hearing, when protestants raised their objection, the examiners advised counsel for protestants that the examiners would consider granting protestants a recess if, when the time came for presentation of protestants' evidence, protestants could show how they had been prejudiced by any alleged notice deficiency. But when the time came for presentation of protestants' case, the attorney for MAK, Jarratt, and Martin simply reiterated her objection. MAK presented no evidence that it was the surface owner of an offset tract entitled to notice. MAK, Jarratt, and Martin did not request a continuance, nor did they explain how the alleged failure of notice had affected their participation in the case. Protestants have not shown that there has been any failure of notice of the type required by Statewide Rule 8, nor have protestants been denied the right to a full and fair hearing.

The examiners recommend that the application be approved because CCS has demonstrated that the operation of the proposed stationary treatment facility and associated pits would not harm groundwater resources, as required by Statewide Rule 8. Statewide Rule 8 (d) (6) states as follows:

“A permit to dispose of oil and gas wastes by any method, including disposal into a pit, may only be issued if the Commission determines that the disposal will not result in the waste of oil, gas, or geothermal resources or the pollution of surface or subsurface water.”

The design of the pits is unquestionably state of the art. CCS has complied with all the requirements found in Statewide Rule 8 and the Surface Waste Management Manual. CCS's design of Landfill Pit #1 exceeds the requirements of Commission rules and guidance documents, since the pit has a double liner and leak detection system. The 60 mil HDPE liner is the industry standard for municipal and RCRA hazardous waste landfills. The HDPE liner material is chemically inert to the affects of the chemicals anticipated to be disposed in the pit.

The examiners believe that the use of secondary and primary geo-synthetic 60 mil liners, in conjunction with the leachate collection system and leak detection system for the Landfill Pit #1, will provide for protection of surface and subsurface water resources. Additionally, the waste to be disposed of into the pits will be de-watered, solid waste which will remain nearly void of liquids at all times. In the unlikely event that the primary liner is somehow compromised, the leak detection system will provide a prompt signal if any liquid accumulates in the geonet netting layer above the secondary liner. If such a leak is detected, the District Office must immediately be notified and operations would have to cease until the liner is inspected and repaired. CCS anticipates a 25 year life for the facility. There will be the opportunity for monitoring of leaks in the primary liner for 20-25 years, even though Landfill Pit #1 will only have a life of 2-3 years. This continuous monitoring over the life of the entire project will provide immediate knowledge that the primary liner in Landfill Pit #1 has been compromised. If Landfill Pit #1 experiences no leak in the primary liner in 20-25 years, the examiners believe that it is highly unlikely that a leak would ever occur to the point of breaching the secondary liner and polluting ground water.

The geology is ideal in protecting the major aquifer in the area. A thick, dry, impervious shale layer forms a natural containment layer that separates waste management activities in the proposed Los Angeles TRD facility from the Yegua-Jackson aquifer at 240 feet. The site was selected, in part, due to the existence of the thick shale layer. With the existing geology and ground water identified at the site and the design of the facility, the examiners believe that the proposed Los Angeles TRD facility and associated pits can be operated without adversely affecting surface and subsurface waters.

FINDINGS OF FACT

1. Notice of this hearing was given to all affected persons at least ten days prior to the date of hearing. Notice of the subject application was published in the *Frio-Nueces Current*, a newspaper of general circulation in La Salle County, on March 24 and March 31, 2011.
 - a. CCS retained a consulting firm, Environmental Resources Management (“ERM”) to assist it in preparation and filing of this application.
 - b. At the direction of CCS, a ERM staff person researched property records of the La Salle County Clerk and tax records of the La Salle County Central Appraisal District to determine the names and addresses of surface owners of all tracts of land adjacent to the proposed CCS facility tract. The ERM staff person who performed this work was experienced in this kind of research.
 - c. A copy of the CCS application was sent to all persons entitled to notice under Statewide Rule 8, including the surface owners of all tracts of land adjacent to the proposed CCS facility tract, on March 18, 2011, the same day the application was filed with the Railroad Commission.
 - d. Protestants Margaret Ann Jarrett, Jill Martin, Cesar A. Garcia Family Trust, and Raymond and Rebecca Jenkins were among the adjacent surface owners to whom the CCS application was mailed on March 18, 2011.
 - e. The Notice of Hearing in this docket was mailed to the applicant and all persons who had filed protests on November 7, 2011.
 - f. The property and tax records researched on behalf of CCS by ERM did not show that MAK Ranch, LP (“MAK”) was the surface owner of a tract adjacent to the CCS facility tract.
 - g. Margaret Ann Jarrett, who was mailed a copy of the CCS application on March 18, 2011, is a partner in MAK.

- h. MAK appeared and participated at the hearing as a protestant but did not present any evidence establishing that it is the surface owner of a tract of land adjacent to the CCS facility tract.
 - i. Failure of CCS to send protestants a copy of the Material Safety Data Sheet filed with the Commission's Technical Permitting Section on September 1, 2011, was a procedural error or mistake under §1.48 of the Commission's General Rules of Practice and Procedure, but does not relate to the legal sufficiency of the notice of the CCS application or notice of hearing. Counsel for protestants Margaret Ann Jarrett, MAK Ranch, LP, and Jill Martin obtained a copy of the MSDS from the Railroad Commission in October 2011.
- 2. CCS requests authority pursuant to Statewide Rule 8 to operate a commercial Stationary Treatment Facility and processing and disposal pits at its proposed Los Angeles TRD Facility, located 15 miles east of the town of Cotulla, Texas.
- 3. The proposed commercial Stationary Treatment Facility and associated processing and disposal pits will be located on a 735 acre tract which is owned by CCS. The proposed site offers easy access to FM 469, reducing truck traffic on rural roads.
- 4. The Los Angeles TRD Stationary Treatment Facility contains equipment and waste management units to process and stabilize oil and gas wastes including two pits, the Receiving Pit and the Landfill Pit #1. The pits will be used to process and dispose of solid oil and gas wastes, primarily consisting of de-watered drilling fluids and drill cuttings.
- 5. The Receiving Pit will be approximately 125 feet by 115 feet and will have a capacity of 8,000 barrels. The Receiving Pit will be used only to manage wastes and will not be used for the ultimate disposal or burial of wastes.
- 6. The primary types of wastes received at the Los Angeles TRD facility will be liquid wastes (spent drilling mud) consisting of 80% liquid and 20% solids or solid wastes (drill cuttings) consisting of 80% solids and 20% liquids.
- 7. Liquids collected from wet wastes will be treated and trucked off-site to existing commercial disposal facilities in the area. Incidental oil will also be reclaimed and sold.
- 8. The Landfill Pit #1 will be approximately 550 feet by 550 feet and will have a capacity of approximately 1,000,000 barrels. Landfill Pit #1 will be used to dispose of dry wastes only that are stabilized with saw dust, lime, fly ash or dry cement if needed.

9. There is one existing water well on the 735 acre proposed facility tract and five water wells within 1 mile of the proposed facility site.
 - a. Groundwater use in this area is typically from the Carrizo-Wilcox aquifer, which is the major aquifer serving the area.
 - b. The Carrizo-Wilcox is found at a depth of approximately 2,500 feet, where three of the water wells in the area are completed.
 - c. The shallowest fresh water is located in the Yegua-Jackson aquifer at an average depth of 240 feet, where the three remaining water wells in the area are completed.
10. The surface soils on the proposed facility site consist of a sandy clay and clay layers on top of a thick impervious shale layer. CCS submitted surface boring logs from four wells on the proposed facility site.
 - a. The sandy clay layer occurs on the surface and is approximately 20 feet thick.
 - b. The sandy clay layer is underlain by a clay layer that is 10 to 40 feet thick.
 - c. The impervious shale layer occurs down to the top of the Yegua-Jackson aquifer and is approximately 200 feet thick.
11. The location of the site meets requirements set out in Statewide Rule 8 and the Commission's Surface Waste Management Manual. The location of the facility does not have any wetlands or water courses and it is not within the 100 year flood plain. The average annual rainfall in the area is 25.6 inches and the average evaporation loss is 56.1 inches.
12. Use of Landfill Pit #1 for disposal of solid waste will not endanger usable quality water resources, as Landfill Pit #1 will be double lined and equipped with a leak detection system.
 - a. The base of Landfill Pit #1 will be built over a 200 foot thick impervious shale barrier.
 - b. The 200 foot shale barrier separates and isolates Landfill Pit #1 from a major aquifer identified in the area.
 - c. After excavation of Landfill Pit #1, the entire pit will be lined with three feet of compacted clay.

- d. Over the clay liner a 6 inch fine soil layer will be placed to protect the 60-mil High Density Polyethylene liner from the clay barrier.
 - e. Over the 6 inch fine soil layer, a geo-synthetic 60-mil HDPE liner will be placed over the entire pit area, which will serve as the secondary liner.
 - f. On top of the 60-mil HDPE liner, a layer of HDPE geonet netting will be installed, which will serve as the liner leak detection drain. The HDPE geonet netting will allow fluids escaping from the primary liner (should a leak occur) to flow towards the end of the pit where it will be collected at a sump and detected by Los Angeles TRD personnel.
 - g. Over the HDPE geonet netting, a second geo-synthetic 60-mil HDPE liner will be placed over the entire pit area, which will serve as the primary liner.
 - h. A second layer of HDPE geonet netting will be placed over the 60-mil HDPE primary liner on the flat bottom portion of the pit. This second HDPE geonet netting will serve as the leachate collection system's liner. The leachate collection system removes any liquids that may be generated within the pit.
 - i. A 12 inch layer of fine soil or waste will then be placed on top of the netting, which serve as a liner cushion allowing the use of heavy equipment without compromising the liners.
 - j. A 2 foot layer of waste will be used as an interior access road fill. This will allow added protection of the waste and liners from daily travel of heavy equipment in the pit.
 - k. Continuous monitoring of the leak detection system in Landfill Pit #1 over the life of the entire project will provide immediate recognition of any leak in the primary liner, providing additional protection of any ground water.
 - l. Since there is no groundwater within 100 feet of surface and Landfill Pit #1 has a double lined leak detection system, no groundwater monitoring wells are required.
13. A sloped pit cap will be placed over the Landfill Pit #1 at closure. The cap is designed to entomb the waste, prevent the infiltration of rain water and provide long term waste burial.
- a. A 6-inch layer of fine soil will go over the cap sub-grade fill. A 40-mil HDPE liner cap will be placed over the fine soil.

- b. A 12-inch layer of fine soil will be placed over the liner to protect it.
 - c. Above the fine soil layer will be a 6-inch layer of topsoil to allow the growth of a vegetative cover.
14. The estimated closure cost to close Landfill Pit #1, assuming that the pit is full, is \$495,000. The total cost to close Landfill Pit #1, the Treatment Facility Receiving Pit and the Treatment Facility is \$1,254,000. CCS is required to submit this amount of financial security prior to operating the facility.
15. The design of the Los Angeles TRD facility exceeds the requirements set out in the Commission's Surface Waste Management Manual, as the Landfill Pit #1 will have a double lined pit with a leak detection system.

CONCLUSIONS OF LAW

- 1. Proper notice was issued as required by all applicable codes and regulatory statutes.
- 2. All things have occurred and been accomplished to give the Commission jurisdiction to decide this matter.
- 3. CCS Midstream Services, LLC's application to operate a commercial stationary treatment facility, associated collecting pit and disposal pit at the Los Angeles TRD Facility complies with Statewide Rule 8 and will not cause pollution of surface water, useable quality water or result in waste of oil, gas or geothermal resources.

EXAMINERS' RECOMMENDATION

The examiners recommend that the Commission approve CCS Midstream Services, LLC's application to operate a commercial stationary treatment facility and associated receiving and disposal pits at the Los Angeles TRD Facility, as set out in the attached Final Order and Permit.

Respectfully submitted,

Richard D. Atkins, P.E.
Technical Examiner

James M. Doherty
Legal Examiner