Z10-05, SUP10-03 AND SUP10-04 (SOUTH HAMMOCK #3, #4 AND #5)

Request #1: Rezone 2.8 acres from "RSF-5" (Single-family residential with a minimum lot size of 5,000 square feet) to "IL" (Limited Industrial) in order to permit the mining and drilling use requested below. Mining and drilling are only permitted in the "IL" district with a Special Use Permit.

Request #2: Special Use Permit for oil and natural gas well drilling. Drilling of the well on this site is anticipated to last for 25 days, with the location being in operation (pumping the well) as long as it is viable. After the 25 days, the directional drilling to 11,000 feet in a northwesterly direction will be completed and the drilling rig will be removed from the site. If oil is discovered in this location, it would be placed in a holding tank and transported off site by truck. If oil or natural gas is not discovered, then all operations will cease, the well will be capped, and the equipment will be removed from the site.

Request #3: Special Use Permit to construct a 3 ½ to 6-inch pipeline to tie into an existing 10 to 12-inch Kinder Morgan gas pipeline for transporting natural gas within a 120-foot city drainage/utility right-of-way and across private property secured through private easements. The pipeline will be placed by boring under the ground rather than digging a trench and placing the pipeline. Excess natural gas as a result of the production operation will be transported by pipeline from the proposed well pad site if the amount cannot be contained internally. The pipeline will be buried and centered on the high bank to the south of the well site, traveling west to Dickinson Avenue. The pipeline would then connect to an existing pipeline located between Dickinson Avenue and the railroad line. Two valves will be located on the pipeline – near the tie into the Kinder Morgan line on Dickinson Avenue and one located at the drill site.

History On May 18, 2009, the Commission recommended approval subject to conditions by a vote of of these same requests with the exceptions of the pipeline alignment being proposing to the east of the drilling site as opposed to the west and the drilling utilizing municipal water supply as opposed to a well. The applicant subsequently withdrew the application prior to the City Council Public Hearing in order to research alternative alignments for the pipeline.

Owners Well Pad Site Location – Lorna Langley; Pipeline Location – City of League City and 5 Private Owners (See attachment #10)

City Council Request to Set Hearing – September 14th; Public Hearing & 1st Reading – September 28th; 2nd Reading – October 12th

Location 920 Texas Avenue, north of Austin Street and east of Texas Avenue

Acreage Zoning – 2.8 acres; Drilling Pad site – 2.8 acres; Pipeline – 0.8 acres

Citizen Response
88 – Notices Mailed to Property Owners within 500 feet
0 – Letters of Support
1* – Letters of Opposition and Petition

*Per the Texas Local Government Code, if property owners of 20% of the land within 200 feet of a proposed change in zoning sign a petition to oppose the request, then the change will require an affirmative vote of ¾ of City Council (6 members) to be approved. (The petition does not affect the Commission's vote.) While a petition opposing the drilling and pipeline requests has been submitted, none of the property owners that signed are within 200 feet of the rezoning/drill site. Property owners of 8.5% of the land area within 200 feet of the pipeline request signed the petition. As a result, it will not trigger the super-majority vote by Council to approve this request.

Attachments

1. Property Owners' Notification Map
2. Photographs of Site
3. Aerial Map
4. Applicant's Responses to Compliance with Chapter 42
5. Report on Land Subsidence Near Oil and Gas Fields in Houston, Texas
6. Noise Survey for Drilling Site
7. Traffic Routing and Management Plan
8. Exhibit of Buffer Yard and Well Pad Site
9. Photo of Valve Site for Natural Gas Pipeline
10. Easement Agreements for Pipeline Crossing
11. Opposition Letter
12. Minutes from Commission Meetings
13. Petition and Petition Map

The Commission should consider the following criteria in its deliberation, which shall be used to substantiate its findings. To determine the extent to which the proposed use would be compatible with surrounding properties, the surrounding land uses and the performance impacts of the oil and natural gas well and natural gas pipeline should be considered. Special Use Permits may allow certain uses of land, buildings or structures where adequate measures can be taken to assure compatibility with surrounding uses, public need and the City as a whole.

DRILLING SITE

Background

Natural gas is a gas consisting primarily of methane. It is found associated with other fossil fuels, in coal beds, as methane clathrates, and is created by methanogenic organisms in marshes, bogs, and landfills. Natural gas in the past was usually produced as a byproduct of producing oil, since the small, light gas carbon chains come out of solution as it undergoes pressure reduction from the reservoir to the surface, similar to uncapping a bottle of soda pop where the carbon dioxide effervesces. Unwanted natural gas can be a disposal problem at the well site. If there is not a market for natural gas near the wellhead, it must be piped to the end user. In the 1800s and early 1900s, such unwanted gas was usually burned off at the well site, which would not be allowed here and would require other disposal such as piping to another user.

Site Attributes

The terrain is flat with some trees and brush mostly located around the perimeter and northern portion of the site. The applicant has not proposed to remove any large trees from this site. The area for the well pad will be located in a portion of the property without trees. The character of the surrounding area is rural in nature. City drainage-ways lie to the south and east of the proposed well site. The drainage easements are 170 feet wide to the east and 120 feet wide to the south.

Access

The subject property is located on the east side of Texas Avenue. After coordinating with the Engineering Department, the applicant has submitted a "Traffic Routing and Management Plan" denoting the proposed routes (see Attachment 7). The applicant has spoken with and intends to obtain access easements by separate instrument from the two property owners that are adjacent to the drainage way if this request is approved.

Water & Sewer

The applicant will be using the City's metered municipal water supply. Per the Engineering Department, the water will be mixed with drilling mud in a closed loop system during operation, stored in a holding tank, pumped into a truck, and disposed of safely off site. They will most likely use a temporary construction meter to recharge the drilling mud. This recharging will be water lost to evaporation and ground absorption during the drilling. Therefore, a maximum 2-inch construction meter should accommodate the temporary usage of water. Anything that requires more water usage would have to be reviewed and approved by the City Engineer. It is anticipated that the operation will require approximately 200,000 to 300,000 gallons of water.

Fire Prevention & Safety

Fire response will be limited to off road brush truck(s) that are located at Station #1 and will require pumper relay trucks, which are located at Station #3. Mutual aid will be required for equipment and manpower. The applicant indicates that they will follow state and federal guidelines. The applicant will have an example of those procedures at the Commission meeting.

As for the City, in case of an incident, the fire department would be dispatched to stand by until the company's representative is on the scene to take charge and direct operations to shut off the product flow and extinguish the blaze if it is on fire. The Fire Department would establish safe zones and fight any other fires that may have been the direct result of the incident.

Chapter 42: Environment Code

The Engineering Department has reviewed the application and indicates "approval of the preliminary technical review". A detailed, comprehensive review will occur at the construction plan phase. The applicant has also submitted a letter addressing the requirements of the Environment Code (attached). The applicant has contracted with a third party consultant who's responsibility is to oversee the safety programs during the drilling phase, set up for production, and installation of the pipeline.

Railroad Commission of Texas
The Railroad Commission of Texas investigates and regulates any discharge, solid waste disposal, stormwater runoff, spills, production capability, and plugging of the site. The Ordinance requires that the application submitted to the Railroad Commission be submitted with the request to the City to drill. The applicant states they are working on the Railroad Commission application. If the well is successful, the material will be transported by pipeline. The oil will be pumped through a closed system where it is never exposed to ambient conditions with an opportunity to spill. The site would also have a spill prevention plan in place for operations.

Texas Commission on Environmental Quality (TCEQ)
The Texas Commission on Environmental Quality (TCEQ) also has jurisdiction through registration of the site required for waste disposal generators.

Subsidence

A study on subsidence authorized by the USGS (United States Geological Survey) in the Houston area shows that there is little to no subsidence at 25 similar fields. Drilled at less than 2,000 feet, 4 of the 29 fields had more than 0.33 feet of differential subsidence from the years 1906-1978. The well being proposed would be drilled approximately 10,000 feet deep. As stated on page 457 of the report, "sediments are less compressible as the depth of burial increases, and differential subsidence tends to be larger as average production depth is shallower". The closest oil fields to our area in the report were Dickinson-Gillock and Webster. Dickinson-Gillock has localized depression on the southern portion due to the aquifer in Texas City and Webster has the largest total subsidence of all of the fields.

Screening

The exhibits submitted indicate a maximum structure height of 20 feet, which is the maximum height allowed, with tank batteries that are 15 feet in diameter and 12 feet, 9 inches in height. The applicant has proposed to secure the entire well pad site with an 8-foot chain link fence. Given that a 50-foot landscaped buffer yard will surround the pad and that the overall site extends beyond this area, the use of chain link with slats is acceptable.

A 50-foot wide landscaped buffer yard is required between the "IL" and adjoining property zoned "RSF-5" and "OS" (Open Space). The buffer yard will surround the perimeter of the site with the exception of the gate location. The applicant has provided an exhibit showing the proposed buffer.

Setbacks

The well location is required to be at least 300 feet from any residence, building or structure without the applicant having first secured written permission of the owner thereof. It has to be 350 feet from the exterior boundary of the property for schools, colleges, churches, theaters or public buildings. The nearest residences are located approximately 375 feet to the north and south of the well location. There are no schools, colleges, churches, theaters or public buildings within 350 feet of the well site.

Lighting

The applicant has stated that all lighting associated with the proposed project will be hooded so that the rays are directed toward the ground and away from adjacent residential property or streets. Drilling has been proposed to be a 24-hour operation and care will be taken to ensure the necessary lighting does not disturb adjacent properties in accordance with City standards.

Noise

The sound intensity level may not exceed 67 decibels between 6:00 a.m. and 10:00 p.m. After 10:00 p.m., the maximum decibel level is 60 for nonresidential. The noise study attached is a study done on the type of rig proposed for use on this location. If the noise exceeds 60 decibels from the nearest property line, then other measures will have to be taken such as fencing or mufflers, covers and new motors for the rigs.

Vibration

According to Section 125-140.I of the Zoning Ordinance, no use shall be permitted which produces ground vibrations noticeable without instruments at the lot line. The applicant indicates that no noticeable vibrations have been detected on a rig similar to one that may be used on this site currently located in Louisiana.

Odor

It is not anticipated that objectionable or offensive odors will be generated by the proposed project. The applicant has indicated that there were no obvious odors in the air when investigating a similar rig site in Louisiana.

Discharge of Toxic or Noxious Matter

According to Section 125-140.I of the Zoning Ordinance, no use shall, for any period of time, discharge across boundaries of a lot line on which it is located toxic or noxious matter in such concentrations as to be detrimental to or endanger the public health, safety, comfort or general welfare, or cause injury or damage to persons, property, or the use of property or land, or render unclean the water of the state to the extent of being harmful or inimical to public health, animal or aquatic life, or the use of such waters for domestic water supply, recreation or other legitimate and necessary uses.

Disposal of toxic or hazardous waste within the city is specifically prohibited. According to the attached response for Chapter 42, all waste generated by the proposed project will be contained within a closed loop system and disposed of with an approved waste disposal contractor. The small amounts of oil produced will be removed by truck daily. If there is a problem and gas is released into the air, it will be routed through an industrial standard flare and burned. Per the applicant, a closed-loop system will be utilized and no contaminants will touch the ground. Best management practices such as silt fencing will further prevent runoff of any material.

Taxes & Valuation

A well that produced minerals with a taxable value of $500 or more would be taxed at $0.63 per $100 valuation. In addition, the value of the land itself would be taxed at $0.63 per $100 valuation. It is not possible to give an estimated tax value since the quantity and type of minerals are unknown at this time.

Site Attributes

A large portion of the pipeline alignment is proposed to be located in a City right-of-way used for drainage and utility lines and in easements on residentially-zoned, private property. This portion of the easement has little vegetation other than grass and is primarily used for drainage. The character of the surrounding area is rural.

Access

Access to the pipeline would be through established access drives for the existing drainage channel and through easements granted by the private property owners. The pipeline would have little traffic after the initial construction phase other than an operator inspection of the line approximately once daily.

Water & Sewer

The applicant has discussed with the City Engineering and Water Utilities Departments the location of all other utility lines within the easement and has agreed to bury the proposed line below any existing utility lines, which would be accomplished with the proposed 4-foot depth centered on the high bank of the easement. No public utilities would be required for the addition of the proposed pipeline.

Fire Prevention & Safety

The *Railroad Commission of Texas* is charged with regulating intrastate pipelines in Texas. The *Federal Department of Transportation* and the *Pipeline Hazardous Materials Safety Administration* are responsible for implementing pipeline safety rules and regulations for pipeline operators in the United States.

In case of an incident, one of the two valves will shut off automatically and the off-site monitoring equipment would safely close the other valve, and immediately alert the pipeline staff. The applicant indicates that the inspections will regularly occur in accordance with industry, state and federal regulations. The applicant indicates that pipeline companies must qualify their operators with the Texas Railroad Commission, have an approved public awareness program, and ensure personnel are in a random drug and alcohol testing program. The applicant will have an example of the procedures at the Commission meeting.

As for the City, in case of an incident, the Fire Department would be dispatched to stand by until the pipeline representative is on the scene to take charge and direct operations to shut off the product flow and extinguish the fire. If there was a fire, it would be extinguished with foam.

Chapter 42: Environment Code

The Engineering Department has reviewed the application and indicates "approval of the preliminary technical review". A detailed, comprehensive review will occur at the construction plan phase. The applicant has contracted with a third party consultant whose responsibility is to oversee the safety programs during the drilling phase, set up for production, and installation of the pipeline.

Screening & Setbacks

The only above ground equipment associated with the pipeline are above ground valve stations for monitoring of the natural gas flowing into the existing pipeline. They are proposed to be located at on the drill site and at the intersection of the proposed line with an existing pipeline. The exact location of the line near the tie in is unknown at this time. Due to the close proximity with the railroad, the valve station may need to be underground or some yet to be determined distance away from the railroad tracks. Fencing and landscaping will be required to be provided around the valve. A site plan will be provided for each valve location at the construction phase.

In terms of setbacks for safety and noise impacts, the state and federal regulations have no distance setback requirements from buildings or other uses. Since the applicant has not determined the exact location of the tie in, determining the distance to the nearest residence, church, school or day care from the valve location is not possible at this time. However, the distances in relation to the pipeline are shown in the table below. See also Attachment #3.

Nearest point of Pipeline Alignment To: (Direction)			
Residence	**Church**	**Structure**	**School**
130 ft (E)	4,000 ft (N)	40 ft (NW)	3,400 ft (ENE)

Lighting

The applicant is uncertain if lighting will be at the valve station. If it is provided, the Ordinance requires hooded lights be used so that the rays are directed toward the ground and away from adjacent residential property or streets.

Noise

The sound intensity level may not exceed 67 decibels between 6:00 a.m. and 10:00 p.m. After 10:00 p.m. the maximum decibel level is 60 for nonresidential zoned areas per Chapter 42-33. There is no noise anticipated from the pipeline or the valve location.

Vibration

The applicant indicates that the pipeline pressure will need to be at the same or higher pressure than the line being tied into. The Kinder Morgan line being tied into has a line pressure that is at approximately 700 psi. The applicant indicates that a 3 ½ to 6-inch pipeline buried at least 4 feet below grade does not pose a risk of vibration.

Odor

The only time odor may be detected from a natural gas pipeline is if there was a leak of odorized gas. According to the applicant, natural gas is typically scented so that leaks can be easily detected. However, the Kinder Morgan natural gas line carries non-odorized gas. If the natural gas is be odorized at the well site, then the odor will need to be removed from the gas prior to entering the Kinder Morgan line, increasing the amount of equipment at the valve site near the tie in.

Discharge of Toxic or Noxious Matter

Per the Zoning Ordinance, no use shall, for any period of time, discharge across boundaries of a lot line on which it is located toxic or noxious matter in such concentrations as to be detrimental to or endanger the public health safety, or general welfare, or cause injury or damage to persons, property, or the use of property or land, or render unclean the water of the state to the extent of being harmful or inimical to public health, animal or aquatic life, or the use of such waters for domestic water supply, recreation or other legitimate and necessary uses.

The potential for any discharge of toxic or noxious matter from the pipeline is very low due to pressure regulators that maintain the proper pressure on the line. Monitors are installed and if there is any change in the pressure, the line is automatically closed at the valves and alerts the operators. If this were to occur, the applicant intends to recycle any gas in the pipeline back into the system for holding instead of venting or flaring. The applicant indicates that due to natural gas being lighter than air with a narrow band of combustion, natural gas is one of the safest energy sources available.

***Drilling* Potential SUP Conditions**

1. Prior to final reading of this request, a bond for Austin Street and Texas Avenue must be posted.
2. Prior to final reading of this request, submit a fee in the sum of $7,500 as a license fee.
3. Prior to final reading of this request, proof of public liability insurance covering all of the operations in the city in bodily injury limits not less than $10,000,000.00 for each person and

not less than $3,000,000.00 for each accident.

4. Restoration of the site once drilling is complete including rezoning of the property to a zoning district compatible with the surrounding area at the time and copy of the plugging report submitted to the Texas Railroad Commission.

5. Provide the Engineering department copies of form W-1 prior to obtaining drilling permit and form W-2 after completion of drilling as they were submitted to the Texas Railroad Commission.

6. Deliveries and/or pickups shall occur between 6:00 am and 10:00 pm and take the routes denoted on the Traffic Routing and Management Plan. The hours specified here will be applied after the 25-day drilling period is complete.

7. If and when the well is operational, trees to be planted in the buffer yard must be 3-inch caliper.

8. Road widening improvements to increase the width of the right-of-way to accommodate the large truck turning radius with temporary materials must be made at the corner of Texas Avenue and Austin Street and along Texas Avenue at the site entrance prior to drilling on the site.

9. No venting of natural gas shall be allowed at any time from this site.

***Pipeline* Potential SUP Conditions**

1. In accordance with Chapter 42, prior to final reading, provide a bond in the amount of $500,000, as recommended by the City Engineer and approved by the City Council based on the type of work to be done, whether or not the streets located in the city are to be torn up, and such other factors as the City Council may deem pertinent. The bond shall be conditioned that the applicant shall faithfully perform the work and all the conditions set out in his permit and that all work within the city shall be in strict accordance with the terms and conditions of this article.

2. At the time construction plans are submitted, include a site plan for the above ground valve sites showing screening and landscaping.

3. Prior to final reading, coordinate with Public Works Department to determine right-of-way usage fee.

For additional information, you may contact Dausha Moore, Planner at 281-554-1097 or via e-mail at dausha.moore@leaguecity.com.