

STATE OF LOUISIANA
OFFICE OF CONSERVATION
BATON ROUGE, LOUISIANA

June 7, 2019

CONSERVATION ORDER NO. ENV 2019-02 CFB

Order denying the construction and operation request of a commercial exploration and production waste (E&P Waste) fluids injection well disposal facility in St. Landry Parish, by Eagle Oil, LLC (Eagle) Operator Code E1500, of Lafayette, Louisiana.

Pursuant to the power delegated under the laws of the State of Louisiana, and particularly Title 30 of the Louisiana Revised Statutes of 1950 as amended, and as implemented in rules and regulations promulgated by the Commissioner of Conservation, and after a public hearing held under Docket No. ENV 2019-02 in Opelousas, Louisiana on January 31, 2019, following legal publication of notice, the following order is issued and promulgated by the Commissioner of Conservation as being reasonably necessary to carry out the provision of the laws of this state.

THE COMMISSIONER OF CONSERVATION FINDS AS FOLLOWS:

- 1) That notice of intent to file an application for a permit to operate a commercial exploration and production waste (E&P Waste) fluids injection well disposal facility in St. Landry Parish was given by Eagle Oil, LLC of Lafayette, Louisiana in accordance with the provisions of LRS 30:4(l) and LAC 43:XIX.Subpart 1.Chapter 5, by publication in The Advocate, the official journal of the State of Louisiana, the Daily World, the official journal of St. Landry Parish, and The Daily Advertiser a general circulatory in St. Landry Parish.
- 2) That Eagle, after thirty (30) day notice as required by LRS 30:4(l) and LAC 43:XIX.Subpart 1.Chapter 5, applied to the Office of Conservation for approval to construct and operate a commercial E&P Waste fluids injection well disposal facility.
- 3) That the Eagle facility in question is proposed to be located in Section 43, Township 4 South, Range 4 East, in St. Landry Parish, Louisiana.
- 4) That the application submitted to the Office of Conservation by Eagle was deemed administratively complete as required by LAC 43:XIX.Subpart 1.Chapter 5, as amended.
- 5) That a public hearing was held in Opelousas, Louisiana on January 31, 2019, after public notice had been given by the Office of Conservation in The Louisiana Register on December, 2018 and in The Advocate on December 12, 2018, and by Eagle in The Daily World and The Daily Advertiser in accordance with the provisions of LRS 30:4(l) and LAC 43:XIX.Subpart 1.Chapter 5.
- 6) Relevant comments were received during the public hearing and comment period suggesting that the applicant did not provide complete and comprehensive impact analysis responses to IT Questions II and IV. Specifically, comments were provided indicating the applicant's responses to these questions did not include evaluation and impact analysis of all truck transportation routes to the proposed injection well disposal facility.
- 7) After careful consideration of all relevant comments warranting evaluation, Investigation, and area inspection, the Commissioner of Conservation finds that the applicant's permit application IT Question responses do not completely and comprehensively include an evaluation and impact analysis of all truck transportation routes to the proposed injection well disposal facility (Facility) from all current and/or future potential oil and gas exploration and production sites located in the Facility's vicinity/potential customer range.
- 8) Therefore, the applicants' response to IT questions regarding site selection and evaluation is not complete as it does not include evaluation and consideration from all potential routes to the site selected for the proposed Facility.
- 9) That responses to relevant comments received during the comment period are presented in Exhibit "A".

NOW, THEREFORE, IT IS ORDERED THAT:

- 1) The proposal of Eagle to construct and operate a commercial E&P Waste fluids injection well disposal facility in Section 43, Township 4 South, Range 4 East, St. Landry Parish, Louisiana, as set forth in the application, is hereby denied.
- 2) Findings of Fact Numbers 4-9 are hereby approved and are expressly ordered.
- 3) The responses to comments for Docket No. ENV 2019 - 02 (Exhibit "A") are hereby incorporated herein.
- 4) This Order shall be effective on and after June 7, 2019.

OFFICE OF CONSERVATION OF
THE STATE OF LOUISIANA



Richard P. Heyoub
Commissioner of Conservation

EXHIBIT “A”

RESPONSE TO COMMENTS

Received During the Hearing and Public Comment Period
For
Eagle Oil, LLC (E1500)
St. Landry Parish

DOCKET No. ENV 2019 – 02

Introduction:

Eagle Oil, LLC of Lafayette, Louisiana submitted an application for approval to construct and operate a commercial deep-well injection waste disposal facility for the disposal of exploration and production waste (E&P Waste) fluids located in Section 43, Township 4 South, Range 4 East, St. Landry Parish, Louisiana. Said application was scheduled for public hearing on January 31, 2019 at the Delta Grand Theatre, located at 120 S. Market St., Opelousas, Louisiana. At the hearing, the public was given opportunity to submit oral and / or written comments concerning the application. The public comment period was open until 4:30 p.m. February 7, 2019 to receive additional comments after the hearing.

The agency received relevant public comments. Provided hereafter are those relevant comments (in **bold** print text) followed by the Commissioner’s responses.

- 1) Relevant comments were received during the public hearing and comment period suggesting that the applicant did not provide complete and comprehensive impact analysis responses to IT Questions II and IV. Specifically, comments were provided indicating the applicant’s responses to these questions did not include evaluation and impact analysis of all truck transportation routes to the proposed injection well disposal facility.**

IT Question II asks, “Does a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former?”

IT Question IV asks, “Are there alternative sites that would offer more protection to the environment than the proposed facility site without unduly curtailing non-environmental benefits?”

After careful consideration of all relevant comments warranting evaluation, investigation and area inspection, the Commissioner of Conservation finds that the applicant’s permit application IT Question responses do not completely and comprehensively include an evaluation and impact analysis of all truck transportation routes to the proposed injection well disposal facility (Facility)

from all current and/or future potential oil and gas exploration and production sites located in the Facility's vicinity/potential customer range.

The above conclusion and Finding of Fact is supported by the Findings of Fact listed and detailed below:

a) The applicant consistently documents a Facility access truck route throughout IT Question responses, and limits its evaluation and impact analysis to only this route, that being the route described in the application from I-49 to Highway 10 at the Lebeau exit, onto Highway 182 to the facility entrance. Exhibit A.1. (State Exhibit 1, Docket No. ENV 2019-02, page 321, 2nd paragraph, page 324, last paragraph, page 325, 2nd paragraph, and page 336, 2nd paragraph).

b) The applicant consistently states throughout the IT Question responses that the "*vast majority*" (emphasis added) of vehicles accessing the Facility will do so in the following manner: exit I-49 (Lebeau exit) to Highway 10 which they will travel approximately 2.5 miles before turning onto Highway 182 which will be traveled approximately 1.2 miles before arriving at the Facility." Exhibit A.2. (State Exhibit 1, Docket No. ENV 2019-02, page 321, 2nd paragraph, page 324, last paragraph, page 325, 2nd paragraph, page 327, 2nd paragraph, and page 336, 2nd paragraph).

c) Finding of Fact 1.b, with the consistently explicit statement expressing that the "*vast majority*" of vehicles will be using the one route detailed above, establishes a reasonable implication that there will be at least one other or more transportation routes to access the Facility. However, the application and IT Question responses do not include evaluation and impact analysis from any route other than the route described in Finding of Fact 1.b.

d) Review of present and past oil and gas activity surrounding the Facility indicates there are current and/or potential future oil and gas exploration and production operations located, and/or that could potentially be located, to the east and north east of the Facility. Exhibit A.3. (Sonris map of surrounding oil and gas activity).

e) Access to the Facility from the east radiating outward to Melville and surrounding areas would most likely include use of the most prominent roadways, i.e., Highway 10 or 71 to Lebeau, turning southwest to Beggs, then north on Highway 182 to the Facility. These routes were not evaluated and no impact analysis was provided by the applicant.

f) Access to the Facility from the northeast radiating outward to Simmesport and surrounding areas could involve the use of at least one or more of the following highways: 105, 107, 361 and 71. None of these routes were evaluated and no impact analysis was provided by the applicant.

g) Highway 10 in the Lebeau and Beggs area is listed as a Louisiana Office of Tourism Scenic Byway known as the Zydeco Cajun Prairie Byway. Highway 10 between Lebeau and Beggs is a two lane highway which includes, direct on route, a school, school zone, head start pre-school, pharmacy, health care facility, church and cemetery. The applicant did not include any of these features in IT Questions II and IV evaluations and impact analyses.

2) The Eagle Oil, LLC permit application failed to provide an analytical assessment or documentation from LADOTD regarding road damage and negative impacts caused by trucks.

The Eagle Oil, LLC (Eagle) permit application response to IT Questions, Eagle included an email attachment from a LADOTD representative detailing that a performance check of routes LA 182 from junction LA 29 to junction LA 10, LA 10 from I-49 to US 71, and LA 29 from I-49 to LA 182 was conducted. It was found that no bridges along that section are posted for reduced loads; therefore, the legal load along these routes are 80,000 pounds for standard 18 wheeler vehicle with two axles on the trailer, and 88,000 pounds for an 18 wheeler with a third axle. The same weight limit would hold true for I-49.

On page 10 of the Eagle permit application response to IT Questions, Eagle states “a new facility will also significantly reduce truck traffic on Louisiana highways going out of the parish or even out of the state on longer trips to commercial injection wells located at greater distances.”

On page 11 of the Eagle permit application response to IT Questions, Eagle states “The vast majority of vehicles accessing the facility will do so in the following manner: exit I-49 (Lebeau exit) to Highway 10 which they will travel approximately 2.5 miles before turning onto Highway 182 which will be traveled approximately 1.2 miles before arriving at the facility. Thus the total stretch of road from I-49 to the facility is approximately 3.7 miles. There are no schools located on this access route. Additionally, there are no visible businesses on the access route.”

On page 1 of the Eagle permit application response to IT Questions, Eagle states “Trucking time and expense should be significantly reduced for some of the operators disposing of produced saltwater at this facility.”

On page 15 of the Eagle permit application response to IT Questions, Eagle states “There is also a solid waste disposal facility approximately 1.7 highway miles from the facility which handle truck traffic; therefore, the roads are equipped and able to handle such traffic and there should be no adverse effect to the public roads and no increased cost.”

On page 16 of the Eagle permit application response to IT Questions, Eagle states “Due to operations of the facility, the local traffic should increase by an average of 75 – 90 truckloads of E&P waste per day. This estimate is based on a fifteen hour day and average five to six truck per hour.”

On page 16 of the Eagle permit application response to IT Questions, Eagle states “It is not known if any significant increased volume of traffic would be noted, because tankers are already hauling salt water over further distances across these roadways to get to disposal facilities. It is not expected to cause any adverse effect to the highway, communities in the area, or citizens. The facility could potentially reduce the truck traffic on some St. Landry parish roads due to the E&P waste currently being transported across St. Landry parish roads out of the parish.”

On page 17 of the Eagle permit application response to IT Questions, Eagle states “The approximate weight of such vehicle loaded with produced salt water or other E&P was is 65,000 lbs. The Louisiana Department of Transportation and Development (LaDOTD) legal weight limitations are found in Louisiana Regulations for Trucks, Vehicles and Loads, 2013 (pg. 9, copy attached). The maximum legal gross weight of any vehicle is 80,000 lbs. Therefore, vacuum trucks that will transport waste into the proposed Eagle Oil site will meet the LaDOTD requirements.”

On page 22 of the Eagle permit application response to IT Questions, Eagle states “Truck traffic will increase slightly in a very limited area between I-49 and the facility (less than 4 miles of highway), but will generally decrease across St. Landry parish with trucks not being forced to travel greater distances outside the Parish to dispose of E&P waste. Impact to the community and environment will be negligible, as truck traffic through this area already takes place to haul salt water to areas further away.”

Review of the area surrounding the proposed facility confirms that the facility location meets the location criteria of LAC 43:XIX.507.A.1 and 2.

Notwithstanding the applicant’s noted satisfactory responses and findings above, the findings and conclusion of the Response to Comments Item 1 clearly indicate that at least one other or more truck transportation routes will be utilized to ship waste to the Facility. Accordingly, the Office of Conservation is not able to verify that the application and IT Question responses include evaluation and environmental impact analysis from all potential truck routes to the Facility.

3) The proposed facility fails to meet LAC 43:XIX.509 (design criteria), therefore, poses a threat to public health, safety, environment, adjacent Thistlewaite Management area, nearby St. Landry Parish Landfill, and Chicot Aquifer.

LAC 43:XIX.509 includes requirements for the design and construction of E&P Waste facilities to prevent movement of E&P Waste into soil, groundwater aquifers, or (USDW) and to prevent the unpermitted discharge of E&P Waste material or E&P Waste byproducts. These provisions also require that commercial facilities be designed and constructed in a manner which is protective of public health, safety and welfare and the environment, including surface waters, groundwater aquifers and the USDW. Accordingly, the Eagle Oil, LLC (Eagle) permit application includes adequate retaining walls around all above-ground storage tanks to provide sufficient capacity to retain the contents of each storage tank. Also included in the permit application are provisions for spill containment at E&P Waste offloading areas to prevent the escape of any E&P Waste spillage which may occur. All E&P Waste offloading and transfer activities will be performed in containment or/and over seamless concrete slabs or/and utilizing spill containers at hose connections, designed and constructed to collect spillage resulting from these activities.

In accordance with the requirements of LAC 43:XIX.Subpart 1.Chapters 4 and 5, the Eagle permit application demonstrates that the proposed location of the disposal well and subsurface disposal zones are in a geological environment which is protective of the USDW by having adequate confining and containment zones. Eagle further indicates in the permit application that the

disposal well will be constructed, operated and monitored in accordance with applicable design, operational and monitoring requirements of LAC 43:XIX.Subpart 1.Chapters 4 and 5 for protection of the USDW and surrounding surface areas.

As required in LAC 43:XIX.519.C.11, the Eagle permit application also included an E&P Waste Management and Operations Plan (WMOP) which contains a spill contingency plan and a plan for routine inspection and maintenance of monitoring equipment in accordance with LAC 43:XIX.515.F.2 and 3. These plans include provisions for daily monitoring and inspection of facility equipment.

Review of the area surrounding the proposed facility confirms that the facility location meets the location criteria of LAC 43:XIX.507.A.1 and 2.

Review of Section G in the Eagle permit application confirms that the tank battery construction meets the requirements of LAC 43:XIX.507.A.5

Section G of the Eagle permit application contains a Department of the Army letter dated June 7, 2018 indicating that 1.22 acres of wetlands do exist within the permitted boundaries of the proposed facility and it may be subject to Corps jurisdiction.

Review of section D in the Eagle permit application confirms that Eagle will mitigate impacted wetlands upon receipt of a facility and injection well permit and before construction begins in accordance with LAC 43:XIX.507.A.6.

Section P of the Eagle permit application has an attached Minor Source Air General Permit, Crude Oil and Natural Gas Production from the Louisiana Department of Environmental Quality Dated November 8, 2018.

- 4) The facility will negatively impact property values and property insurance. In addition, the application failed to provide an accurate analysis of impacts to property values because the proposed facility was compared to a landfill.**

On page 13 of the Eagle permit application response to IT Questions, Eagle states “The proposed Eagle Oil facility is not intended to be a landfill, but if compared to the footprint and operations of large volume or small volume landfills, the site will not be stockpiling or storing waste, as with a landfill. E&P waste fluids will be disposed into subsurface geologic formations which are capable of receiving high volumes of such fluids, primarily produced saltwater, which is being returned to the environment from which they came. Therefore, if property values were to be impacted by the Eagle Oil facility and if one were to use the low volume gradient in Professors Ready’s report, the impact of the facility on nearby property values would be minimal.”

The Office of Conservation has found the above response acceptable to address this question, and review of the area surrounding the proposed facility confirms that the facility location meets the location criteria of LAC 43:XIX.507.A.2.

- 5) **The Eagle Oil, LLC permit application failed to address access road construction and design, or impacts to adjacent property from the access road construction. In addition, the application failed to provide a non-wetland water 404 permit from the US Army Corps of Engineers prior to construction of the access road.**

Section G of the Eagle Oil, LLC (Eagle) permit application contains a letter dated June 7, 2018 from the Department of the Army, which states, "Additionally, a DA permit will be required if you propose to deposit dredged or fill material into non-wetland water subject to Corps jurisdiction. Non-wetland water that may be subject to Corps jurisdiction are designated in blue on the map." Attachment 4-4-A of this letter details the proposed permitted boundary of the facility and proposed access road.

Review of section D in the Eagle permit application confirms that Eagle will mitigate impacted wetlands upon receipt of a facility and injection well permit and before construction begins in accordance with LAC 43:XIX.507.A.6.

Review of section D, E, and G of the Eagle permit application confirms that placement of the access road was detailed on a schematic diagram in accordance with LAC 43:XIX.519.C.5.

Review of the area surrounding the proposed facility confirms that the facility location meets the location criteria of LAC 43:XIX.507.A.2.

- 6) **The Eagle Oil, LLC permit application failed to comply with all location criteria in accordance with LAC 43:XIX.507. But more specifically:**

- a. **The applicant failed to obtain a wetland permit from the US Corps of Engineers. In addition, the application inaccurately details 2.2 acres of wetlands exist within the proposed permitted boundaries.**

Section G of the Eagle Oil, LLC (Eagle) permit application contains a Department of the Army letter dated June 7, 2018 indicating that 1.22 acres of wetlands do exist within the permitted boundaries of the proposed facility and it may be subject to Corps jurisdiction.

In addition, review of section D in the Eagle permit application confirms that Eagle will mitigate impacted wetlands upon receipt of a facility and injection well permit and before construction begins in accordance with LAC 43:XIX.507.A.6.

- b. **Water wells owned by Joseph Kenneth Fontenot and Michael Patrick Kennedy are within 500' of the proposed facility, in addition, the application failed to provide all water wells within one mile of the proposed facility.**

Specific locations of the above mentioned water wells were not provided, therefore, the Office of Conservation is lacking sufficient data to properly locate these water wells.

However, after review of Section D within this permit application and the Office of Conservation water well database, it was confirmed that the application provided a map drawn to scale showing all public water supply and private water supply wells within 1 mile of the proposed facility in accordance with LAC 43:XIX.519.C.4.d and meets the location criteria of LAC 43:XIX.507.A.1.

In addition, Section D of the Eagle permit application contains an attached email from Mayeux surveying confirming that a ground survey of water wells was conducted.

c. The Eagle Oil, LLC permit application failed to demonstrate compliance with LAC 43:XIX.507.A.5 (100 year flood).

Section D of the Eagle Oil, LLC (Eagle) permit application contains an Department of the Army letter dated August 3, 2018 detailing that the proposed facility is located within a Flood Zone A and has an associated base flood elevation of +38'.

Page i of Section G in the Eagle permit application states "The proposed Eagle Oil facility will be located in Zone A, according to Flood Insurance Rate Map (FIRM) # 22097C0150D (eff 8/5/2010, copy attached) for St. Landry Parish (NFIP Community # 220165)."

Review of Section G in the Eagle permit application confirms that the tank battery construction meets the requirements of LAC 43:XIX.507.A.5.

d. The Eagle Oil, LLC permit application failed to demonstrate compliance with LAC 43:XIX.507.A.2 because the proposed facility is located within 500' of residents.

Review of the area surrounding the proposed facility confirms that the facility location meets the location criteria of LAC 43:XIX.507.A.2.

7) The applicant only requested and received a 5 acre wetland determination from the Army Corps of Engineers, but the facility is proposed to encompass 5.1 acres. In addition, the application is contradicting because it details the entire facility is 5.5 acres and 6.4 acres.

Review of section D in the Eagle permit application confirms that Eagle will mitigate impacted wetlands upon receipt of a facility and injection well permit and before construction begins in accordance with LAC 43:XIX.507.A.6.

Section G of the Eagle Oil, LLC (Eagle) permit application contains a Request for a Wetland Determination which was submitted to the US Army Corps of Engineers. The request details a tract size of 5 acres and description stating "five acre tract on front of property to be used for commercial SWD facility". In addition to this summary, a detailed diagram certified by a professional land surveyor was included in the request labeled as A.O.R. – Attachment No. 2. This diagram details dimensions of the proposed facility which equates to approximately 5.086 acres (not including the proposed access road that is outside of the proposed permitted boundaries).

Section E of the Eagle permit application, Eagle states “The proposed fenced facility boundary is approximately 5.1 acres in size.”

On page 9 of the Eagle permit application response to IT Questions, Eagle states “The total land area to be used for the facility is approximately 5.1 acres....”

The Office of Conservation has found the above noted statements acceptable to address this question.

8) The Eagle Oil, LLC permit application failed to identify all residences within ¼ mile of the proposed facility in accordance with LAC 43:XIX.519.C.4.c.

Review of Section D in the Eagle Oil, LLC permit application confirms that a map drawn to scale detailing the location and identification of all residential, commercial, or public buildings or hospitals within ¼ mile of the facility property boundaries is in compliance with LAC 43:XIX.519.C.4.c.

9) The Eagle Oil, LLC permit application failed to consider alternative disposal options which would be less harmful to the environment and aquifer.

On page 18 of the Eagle Oil, LLC (Eagle) permit application response to IT Questions, Eagle states “Other alternative projects are not believed to be economically viable or feasible for disposal of liquid E&P wastes in this area. Costs, practicality, and suitability of various alternative means of disposal are noted in a 2006, Argonne National Laboratory report available through the US Department of Energy (Offsite Commercial Disposal of Oil and Gas Exploration and Production Waste; Availability, Options, and Cost).”

On page 19 of the Eagle permit application response to IT Questions, Eagle states “Alternatives to deep well injection may be recycling, or the treatment of the produced saltwater to remove impurities. There is not a current need for additional sources of salt water in the area, so recycling is not a viable alternative. Land treatment of produced saltwater or gas plant waste fluids is not an acceptable means of disposal per LAC 43:XIX.549.C.7.f.”

On page 19 of the Eagle permit application response to IT Questions, Eagle states “Treatment and discharge of the produced saltwater to the surface poses additional risk to the environment, including risk of contaminating surface or ground water. Regarding treatment and surface discharge, reliable technologies have not been developed to effectively treat large volumes of produced E&P waste for discharge to the waters of the State of Louisiana. Thermal treatment is another option that has been tried in rare instances, but has the highest associate cost for disposal.”

On page 19 of the Eagle permit application response to IT Questions, Eagle states "Burial in landfills for produced water has been tried, but the requirement for solidification, which is generally required, drives up the costs."

On page 19 of the Eagle permit application response to IT Questions, Eagle states "Class II injection wells have been used to dispose of produced fluids since the 1930's and, today, there are over 170,000 such wells location in 31 states (Groundwater Protection Council, Injection Wells: An Introduction to Their Use, Operation and Regulation, August 2005)."

On page 20 of the Eagle permit application response to IT Questions, Eagle states "Other technologies are available, water treatment and discharge, and incineration, but none of the other alternatives are as protective of the environment as deep well injection nor are they an economically viable alternative as noted in the Argonne National Laboratory report cited previously."

On page 20 of the Eagle permit application response to IT Questions, Eagle states "A 2000 API report (Overview of Exploration and Production Waste Volumes and Waste Management Practices in the United States) indicates that approximately 92% of produced water is managed through well injection into subsurface reservoirs, generally considered the safest and most effective method for handling these type fluids. Deep well injection is also the noted as the most cost-effective means of disposal E&P waste liquids in the previously referenced Argonne National Laboratory report."

On page 20 of the Eagle permit application response to IT Questions, Eagle states "Deep well injection is the primary method of disposal of E&P waste liquids from oil and gas exploration. (statements in this section also supported by a presentation available online at [https://www.epa.gov/sites/production/files/documents/21_McCurdy - UIC Disposal 508.pdf](https://www.epa.gov/sites/production/files/documents/21_McCurdy_-_UIC_Disposal_508.pdf))"

On page 22 of the Eagle permit application response to IT Questions, Eagle states "Produced water managed through Class II well injection into subsurface reservoirs is generally considered the safest and most effective method for handling these types of fluids (Overview of Exploration and Production Waste Volumes and Waste Management Practices in the United States, API, May 2000)."

On page 22 of the Eagle permit application response to IT Questions, Eagle states "Deep well injection has been proven effective in thousands of Class II injection wells across Louisiana. The surface facility designs, multiple casings and cement designs and tubing and packer designs provide multiple layers of protection to the surface environment and the USDW. By injecting the brine, Class II wells prevent surface contamination of soil and water. (http://dnr.louisiana.gov/assets/OC/im_div/uic_sec/EPAposterofwells.pdf)."

The Office of Conservation has found the above noted responses acceptable to address this question.

10) The applicant failed to consider alternative sites for disposal and contained a flawed site selection process.

On page 26 of the Eagle Oil, LLC (Eagle) permit application response to IT Questions, Eagle states "The primary reasons this site was chosen is because the site meets the criteria, including the location and environmental criteria, necessary for the construction and operation of injection wells for produced fluids. The more significant criteria this site meets are strategic location to oil and gas production, zoning, proper subsurface geology as confirmed by a licensed geologist, surface conditions, availability of the site and the LDNR location criteria."

On page 26 of the Eagle permit application response to IT Questions, Eagle states "Additionally, the facility has easy access for truck traffic, being located a short distance (approximately 3.7 highway miles) from Interstate 49 which is obviously equipped to handle high volume traffic including trucks."

On page 26 of the Eagle permit application response to IT Questions, Eagle states "The vast majority of vehicles accessing the facility will do so in the following manner: exit I-49 (Lebeau exit) to Highway 10; proceed on Highway 10 approximately 2.5 miles before arriving at the facility. Thus the total stretch of road from I-49 to the facility is approximately 3.7 miles. There are no schools located on this access route. Additionally, there are no visible businesses on the access route. Furthermore, the St. Landry Fire Department District 3 is located approximately 1.2 miles from the facility on the corner of Highways 10 and 182 in the unlikely event of an emergency. The location is in a rural area of the parish with a low population density. All of these factors combine to make the location ideal for the facility."

On page 26 of the Eagle permit application response to IT Questions, Eagle details specific advantages of the site:

- The location of the site will provide a central location for oil and gas operators to properly dispose of E&P waste fluids.
- The subsurface geology is appropriate for injection of E&P waste fluids.
- The proposed injection formation is not productive in the area.
- This site does not have groundwater contamination.
- The rural area in which the site is located will not adversely affect the public.
- The site is near major corridor I-49.
- There is a fire department within 2 miles of the facility in the unlikely event of an emergency.
- This is an area of active drilling activity with many producing oil and gas wells. This site is for convenience to nearby oil and gas operators.

On page 26 of the Eagle permit application response to IT Questions, Eagle details that other sites were evaluated and considered. Eagle also details that each alternative site was evaluated based on the following criteria:

- Strategic location near oil and gas operations generating non-hazardous oilfield waste, liquids, as previously defined

- Zoning
- Land use
- Proper subsurface geology and surface conditions
- Avoidance of floodplain
- Ready access
- Lack of groundwater contamination
- Greenfield
- Wetlands
- Infrastructure
- Availability
- Minimum Size and Configuration
- Location criteria of the regulations

On page 27 of the Eagle permit application response to IT Questions, Eagle states “The chosen site should be free of groundwater contamination. The site must meet the LDNR location criteria which are defined at LAC 43:XIX.507 and include a certain minimum distance from a public water supply, 500 feet from residential, commercial or public building, church, school or hospital. To ensure the facility maximizes trucking use of established roadways, the facility should have ready access to appropriate highways. All facilities required access to infrastructure as this facility does. Infrastructure includes water, electrical, and roadways. In addition, the property must be available which often not the case, particularly if mineral production is occurring on the property. Therefore Eagle had to diligently seek even properties that were not on the market to finally locate a suitable site. Each of the considered are discussed below.

- Site No. 1: The location of Site 1 is approximately 14.5 miles from the proposed facility. Section 60, Township 6 South, Range 4 East, St. Landry Parish, Louisiana. Exiting Interstate I-49, take the Opelousas/Port Barre exit, head east approximately 2.5 miles off of HWY 190.
- Site No. 2: This site is located near the solid waste disposal facility and landfill approximately 2 miles from the proposed facility location. Section 12, township 4 South, Rand 4 East, St. Landry Parish, Louisiana.
- Site No. 3: Site No. 3 is located in Section 1, Township 6 South, Range 5 East, St. Landry Parish, Louisiana. The site comprises approximately 719 acres. Site No. 3 is located about 3 miles east of Port Barre off of Par Rd 4-15. The plan was to use abandoned well SN 185639, the WX RA SUC Tomlinson Well.”

Since the findings and conclusion of the Response to Comments Item 1 clearly indicate that at least one other or more truck transportation routes will be utilized to ship waste to the Facility, the applicants’ response to the IT questions regarding site selection and evaluation is not complete as it does not include evaluation and consideration from all potential routes to the site selected for the proposed Facility.

11) The applicant provided inconsistent flood zone elevations.

Section G of the Eagle permit application contains a letter from the Department of the Army Dated August 3, 2018. This letter demonstrates that the site is located in Zone A with an associated base flood elevation of +38' North American Vertical Datum – (NAVD).

12) The Eagle Oil, LLC permit application is misleading because it details the area as rural, but the immediate area contains houses, schools, businesses, a game preserve, local agriculture, and forested lands supported by the US Department of Agriculture Conservation Programs.

Review of the area surrounding the proposed facility confirms that the facility location meets the location criteria of LAC 43:XIX.507.A.2.

13) The applicant failed to detail that they will obtain the required Access Connection Permit from LADOTD.

The IT Questions section of the Eagle Oil, LLC permit application has an attached email which details that Eagle should contact the LADOTD district office in Lafayette to obtain an Access Connection Permit prior to moving forward with the facility. Since LADOTD is the regulating authority for Access Connection Permits, Eagle is required to contact LADOTD for issuance of such permit(s).

14) The proposed facility will not benefit the local community or St. Landry parish. No local jobs will be created.

On page 12 of the Eagle Oil, LLC (Eagle) permit application response to IT Questions, Eagle states "Approximately seven (7) jobs will be created by the permitting and operation of this commercial saltwater disposal well facility". "Applicable taxes will be paid to St. Landry Parish. Taxes on fuel will be paid to state and federal authorities. The oil and gas operators in the area will save additional dollars on operations by reducing the distance to transport E&P waste on Louisiana Highways, which will also reduce road wear. This will prolong the life of the oil and gas wells, thereby increasing severance taxes to the State of Louisiana for a longer period of time and saving jobs for personnel maintaining and servicing the wells."

On page 12 of the Eagle permit application response to IT Questions, Eagle states "Additional positions will be created for truck drivers transporting E&P waste to the facility, and regulatory consultants to maintain regulatory requirements."

On page 13 of the Eagle permit application response to IT Questions, Eagle states "The proposed facility would be subject to ad valorem taxes by St. Landry Parish." "Taxes will be paid on diesel fuel purchased to power the trucks transporting E&P waste. The recipients of these taxes will be state and federal governing bodies."

The Office of Conservation has found the above noted responses acceptable to address this question.

15) The Eagle Oil, LLC permit application failed to demonstrate appropriate funding in regards to damages and closure requirements. In addition the application failed to provide a draft form certification of liability insurance.

LAC 43:XIX.519.C.13 states "Prior to beginning construction, final (official) documentation of financial responsibility must be submitted to and approved by the commissioner."

LAC 43:XIX.519.C.14.b states "The bond or letter of credit must be renewable on October 1 of each year and must be submitted to and approved by the commissioner prior to beginning construction."

Review of Section M in the Eagle Oil, LLC (Eagle) permit application confirms that a draft Certificate of Liability Insurance was provided as required by LAC 43:XIX.519.C13 and in accordance with LAC 43:XIX.511.E.

Review of Section N in the Eagle permit application confirms that a draft Irrevocable Letter of Credit and Surety Bond was provided in accordance with LAC 43:XIX.519.C.14.b.

16) The Eagle Oil, LLC permit application failed to demonstrate a need for this facility at the proposed location.

On page 10 of the Eagle Oil, LLC (Eagle) permit application response to IT Questions, Eagle states "No commercial SWD facility is currently located within St. Landry Parish. This despite the fact there are approximately 99 producing wells in St. Landry Parish as reported on LADNR SONRIS. Additionally, no commercial SWD facility is located in the parishes immediately to the north (Avoyelles) or east (Point Coupee) of St. Landry which have approximately 150 combined producing wells. Eagle has also reviewed current and historical records at the Office of Conservation regarding drilling and production and is of the opinion that a commercial E&P waste disposal facility is necessary to benefit the oil and gas operators in the area and reduce the distances that trucks are required to transport this waste."

On page 10 of the Eagle permit application response to IT Questions, Eagle states "The principal officers for Eagle Oil determined a need for a commercial facility in the vicinity of south central Louisiana with the existing Tuscaloosa Shale play and an emergence of the Austin Chalk oil play. Such a facility is needed to service the waste generated during the drilling and production of wells in the area. Please note the following articles on the Austin Chalk:

*<http://www.dnr.louisiana.gov/assets/OMR/ACPforOMR.2018.pdf>,

*http://www.theadvocate.com/baton_rouge/news/business/article_93006a30-af4d-

[11e7-a31a-4314cb471749.html](http://www.apalachtimes.com/news/20180410/opinion-austin-chalk-louisianas-golden-egg),

[*http://www.apalachtimes.com/news/20180410/opinion-austin-chalk-louisianas-golden-egg.](http://www.apalachtimes.com/news/20180410/opinion-austin-chalk-louisianas-golden-egg)”

On page 11 of the Eagle permit application response to IT Questions, Eagle states “the facility is ideally located in St. Landry parish to service current production in the area and to also accommodate future production from the Austin Chalk and Tuscaloosa Marine Shale plays.”

On page 15 of the Eagle permit application response to IT Questions, Eagle states “A query of the LADNR SONRIS system indicates no other commercial deep well injection waste disposal facility currently operational in St. Landry Parish.”

On page 16 of the Eagle permit application response to IT Questions, Eagle states “Yes, this location is centrally located to provide for active production in St. Landry Parish, where no commercial SWD facility exists, and future production in the Tuscaloosa Marine Shale and Austin Chalk plays.”

The Office of Conservation has found the above noted responses acceptable to address this question.

- 17) The Eagle Oil, LLC permit application failed to comply with LAC 43:XIX.519.C.10 because the application didn’t detail that there is a pipeline located under the property of the proposed facility.**

Review of Section J of the Eagle Oil, LLC (Eagle) permit application confirms that a topographic map of sufficient scale was included which details pipelines within one mile of the site boundary in accordance with LAC 43:XIX.519.C.10.

- 18) The Eagle Oil, LLC permit application to the Office of Conservation is inadequate regarding air emissions because it does not mention flares nor does it disclose the location of the combustions flare.**

Section P of the Eagle Oil, LLC permit application contains a Minor Source Air General Permit letter from the Department of Environmental Quality dated November 8, 2018. This Minor Source Air Permit letter demonstrates compliance with LAC 43:XIX.519.C.16 with regards to air permitting.

- 19) The Eagle Oil, LLC permit application falsely details that the proposed facility does not flood and drains well because it was evaluated during a dry period.**

Review of Section G in the Eagle Oil, LLC (Eagle) permit application confirms that the tank battery construction meets the requirements of LAC 43:XIX.507.A.5

Section G of the Eagle permit application contains a Department of the Army letter dated June 7, 2018 indicating that 1.22 acres of wetlands do exist within the permitted boundaries of the proposed facility and it may be subject to Corps jurisdiction.

Review of section D in the Eagle permit application confirms that Eagle will mitigate impacted wetlands upon receipt of a facility and injection well permit and before construction begins in accordance with LAC 43:XIX.507.A.6.

Page i of Section G in the Eagle permit application states "The proposed Eagle Oil facility will be located in Zone A, according to Flood Insurance Rate Map (FIRM) # 22097C0150D (eff 8/5/2010, copy attached) for St. Landry Parish (NFIP Community # 220165)."

Section G of the Eagle permit application contains a letter from the Department of the Army Dated August 3, 2018. This letter demonstrates that the site is located in Zone A with an associated base flood elevation of +38' North American Vertical Datum – (NAVD).

Page iii in Section D of the Eagle permit application states "Site reconnaissance indicates no standing surface water or flooding on the site. The surface owners of the proposed location have indicated they have never observed flooding on the property and that it has historically drained well."

Section D of the Eagle permit application contains a notarized affidavit executed on January 2, 2018 by Clay Courville whom is described as president and operations manager of EDI Environmental Services. The affidavit states "No standing pools of water were observed on the Subject Property". The affidavit also states "Based upon the results of the assessment no further investigation is recommended, as no environmental concerns were identified. The proposed SWD well location shown on Exhibit "B" appears to be environmentally suitable for its intended purpose."

The Office of Conservation has found the above noted responses/statements acceptable to address this question.

- 20) The Office of Conservation failed to properly notify citizens of this proposed facility. In addition, a clear description of the facility location was not provided because a legal description was used instead of a physical address.**

Further review of the Eagle Oil, LLC permit application confirms compliance with LAC 43:XIX.519.B for publishing a notice of intent to file a commercial class II E&P waste disposal facility application with the Office of Conservation.

- 21) The applicant failed to obtain a storm water discharge permit and provide a plan for dealing with routine flooding and pooling outside the major spill containment areas such as the access road and truck staging area. In addition, the application failed to address impacts to adjacent property considering the proposed facility must be elevated to meet the 100 year flood zone requirements.**

Further review of the Eagle Oil, LLC (Eagle) permit application confirms that Section O of the application contains an affidavit of no discharge in compliance with LAC 43:XIX.519. This affidavit states "This affidavit is being executed for the purpose of notifying the Louisiana Department of Natural Resources that there will be no discharge of any Exploration and Production Waste (E&P Waste) or rainwater, storm water or other fluids or materials which have contacted E&P Waste from the proposed Eagle Oil facility into the waters of the State of Louisiana."

Review of the area surrounding the proposed facility confirms that the facility location meets the location criteria of LAC 43:XIX.507.A.2.

- 22) The Eagle Oil, LLC permit application failed to provide an environmental health and safety plan which describes sampling methods and procedures to determine potential risks to public health safety and welfare to the environment in accordance with LAC 43:XIX.515.F.7. In addition, the application also failed to reference surface or groundwater sampling program or monitoring plan in accordance with LAC 43:XIX.541.**

Review of Section K (Waste Management and Operations Plan) of the Eagle Oil, LLC permit application confirms compliance with LAC 43:XIX.515.F, indicating how the facility will comply with the applicable environmental monitoring requirements of LAC 43:XIX.Chapter 5.

- 23) EDI Environmental Services performed an environmental assessment of the proposed facility and incorrectly concluded zero environmental issues because the proposed facility is located in a flood zone A, contains wetlands and non wetland waters, and a federal wetlands preservation area immediately adjacent to the site.**

Section G of the Eagle Oil, LLC (Eagle) permit application contains a Department of the Army letter dated June 7, 2018 indicating that 1.22 acres of wetlands do exist within the permitted boundaries of the proposed facility and it may be subject to Corps jurisdiction.

In addition, review of section D in the Eagle permit application confirms that Eagle will mitigate impacted wetlands upon receipt of a facility and injection well permit and before construction begins in accordance with LAC 43:XIX.507.A.6.

Section G of the Eagle permit application contains a letter from the Department of the Army Dated August 3, 2018. This letter demonstrates that the site is located in Zone A with an associated base flood elevation of +38' North American Vertical Datum – (NAVD).

Review of Section G in the Eagle permit application confirms that the tank battery construction meets the requirements of LAC 43:XIX.507.A.5.

Section G of the Eagle permit application contains a letter from the Department of the Army which states "Additionally, a DA permit will be required if you propose to deposit dredged or fill material into non-wetland water subject to Corps' jurisdiction. Non-wetland water that may be subject to Corps' jurisdiction are designated in blue on the map". Eagle is required to contact the Department of the Army and obtain the proper permit(s) if they propose to deposit dredged or fill material into non-wetland water subject to the Corps' jurisdiction.

Review of the area surrounding the proposed facility confirms that the facility location meets the location criteria of LAC 43:XIX.507.A.2.

24) The Office of Conservation hearing officer did not allow all concerned residents an opportunity to speak at the public hearing.

Docket ENV 2019-02, Page 20, states "Please understand tonight you may make oral comments or submit written comments". "The public comment period will be held open to receive additional comments until 4:30 p.m., Thursday, February 7, 2019, which is a week from today."

Review of the above statement located in Docket ENV 2019-02 confirms compliance with LAC 43:XIX.527.D.

25) The Eagle Oil, LLC application failed to detail the number of injection wells, the diameter of each well, and how deep each well will be drilled.

Review of Section E of the Eagle Oil, LLC (Eagle) permit application confirms that one injection well was detailed on the proposed facility diagram.

Review of Section N of the Eagle permit application confirms that one injection well was included in the closure plan and cost estimate. In addition, this section also includes a proposed plug and abandonment wellbore schematic which displays the depth and casing size.

Section F of the Eagle permit application contains a notification of review letter from the Office of Conservation, Injection and Mining Division, for one Class II Commercial SWD well, Application No. 39370.

26) The Eagle Oil, LLC permit application failed to detail the amount of waste that will be received each day. In addition, the application details inconsistent average injection and maximum injection amounts.

Review of Section K of the Eagle Oil, LLC permit application confirms the following statements:

- “The average anticipated volume of waste that will enter the facility is 7,500-9,000 bbls per day.”
- “The average daily rate of waste disposal (injection) is 8,640 bbls per day, at 6.0 bbls per minute.”
- “The maximum daily rate of waste disposal (injection) is 14,400 bbls per day, at 10 bbls per minute.”

On page 3 of the Eagle permit application response to IT Questions, Eagle states “The average amount of E&P waste to be received is 7,500 – 9,000 barrels per day, and the maximum amount of liquid E&P waste to be injected into the proposed commercial Class II injection well is 14,400 barrels per day.”

The Office of Conservation has found the above noted responses acceptable to address this question.

27) The fire service, police service, and medical service will not be able to handle accidents caused by the proposed Eagle Oil, LLC facility.

On page 14 of the Eagle Oil, LLC (Eagle) permit application response to IT Questions, Eagle states “No significant increase in police protection cost should arise from the construction and operation of this facility.” “When the subject facility is closed, a locked gate, and chain link fencing, and a security system will secure the property.”

On page 14 of the Eagle permit application response to IT Questions, Eagle states “The flammability of E&P waste is based mainly on the flammability of small amounts of hydrocarbons within the E&P waste. The explosiveness of this material is greatly reduced when associated with produced water. The facility will have fire protection equipment to handle less significant emergencies. The facility will develop an Emergency Response plan that will allow quick and effective action during emergency situations. Furthermore, as indicated above, the St. Landry Fire Department District 3 is located approximately 1.2 miles from the facility on the corner of Highways 10 and 182 in the unlikely event of an emergent situation requiring the action of the fire department. There will be no significant increase in public cost due to the subject facility being installed.”

On page 14 of the Eagle permit application response to IT Questions, Eagle states “Public costs for medical facilities will not increase due to the construction and operation of the proposed facility. The material handled at the facility are in similar nature as the oil and condensate produced in oil fields in the area. The majority of the liquids handled at the proposed E&P waste facility will be produced saltwater, which is non-hazardous and non-flammable. There should be no new additional threats to human health.”

The Office of Conservation has found the above noted responses acceptable to address this question.

28) The Eagle Oil, LLC permit application incorrectly details that the nearest community is Washington, but the proposed facility is in the community of Beggs.

On page 13 of the Eagle Oil, LLC (Eagle) permit application response to IT Questions, Eagle states "The nearest communities are Beggs, located approximately one mile from the proposed facility and Washington, located approximately six miles away..."

The Office of Conservation has found the above noted response acceptable to address this question.

29) The Eagle Oil, LLC permit application contains outdated information because a survey submitted with the 2015 stamp of Michael Mayeux details that Raymond Beaux is a landowner. Raymond Beaux has not owned the land for about 25 years.

Section D of the Eagle Oil, LLC (Eagle) permit application confirms that a survey stamped by Michael Mayeaux dated April 22, 2015 included with the Affidavit of Clay Courville details a landowner across the street from the proposed facility as Raymond Beauxis.

Review of section D, G, and H of the Eagle permit application confirms surveys that are stamped by Michael Mayeaux detail Michael Patrick Kennedy as the landowner the property directly across from the proposed facility.

Review of Section D of the Eagle permit application confirms that an aerial diagram labeled as attachment D-1 details the land owner in question as Michael Patrick Kennedy.

Review of page 8-9 of Section K in the Eagle permit application confirms that a list of nearby landowners or inhabitants which may be directly or indirectly affected by a release. This list of inhabitants does not include Raymond Beauxis but does include Patrick Kennedy.

The Office of Conservation has found the above noted responses/statements acceptable to address this question.

30) The Eagle Oil, LLC permit application incorrectly details that the property was most recently used for cattle, but it currently is only used for recreational purposes.

On page 9 of the Eagle Oil, LLC (Eagle) permit application response to IT Questions, Eagle states "The property is currently used for cattle farming as well as recreational purposes."

The Office of Conservation has found the above noted response acceptable to address this question.

31) The Eagle Oil, LLC permit application incorrectly details that there are no visible businesses near the proposed site.

Review of Section D of the Eagle Oil, LLC permit application confirms compliance with location criteria in accordance with LAC 43:XIX.507.A.2.

32) The Eagle Oil, LLC permit application failed to identify Mrs. Stephenson's antebellum cottage.

On page 30 of the Eagle Oil, LLC (Eagle) permit application response to IT Questions, Eagle states "There are several historically significant homes and antebellum homes located in the "Grand Prairie" area of northern St. Landry Parish, north of the town of Washington and near the subject site, which are listed on the National Register of Historic Places. All but one are located three miles or more from the proposed facility. However, historic Homeplace, National Register Information System ID # 80004321 (period significance 1825-1849). Homeplace is located approximately 1.05 mile from the proposed injection well on La Hwy 182."

The Office of Conservation has found the above noted response acceptable to address this question.

Review of the area surrounding the proposed facility confirms that the facility location meets the location criteria of LAC 43:XIX.507.A.2.

33) The Eagle Oil, LLC permit applicant provided a list for notification of surrounding landowners or inhabitants that will be directly or indirectly affected by spills or releases. Six locations are included with only addresses, no phone numbers.

On Section K, page 7 of the Eagle Oil, LLC (Eagle) permit application, Eagle details six nearby land owners or inhabitants with listed addresses. In addition, Eagle states "phone numbers will be obtained prior to construction of the facility."

The Office of Conservation has found the above statement acceptable to address this question.

34) No one from the Louisiana Office of Conservation physically visited the proposed site. A permit should not be rendered until Conservation has physically visited the proposed site.

Representatives from the Louisiana Office of Conservation performed a field evaluation of the proposed facility and access routes on May 8, 2019.

35) The applicant failed to describe “other E and P Waste fluids” that will be received at this facility.

Section K, page 1, of the Eagle Oil, LLC permit application details the E&P waste types to be processed, stored, and injected at the proposed facility in accordance with LAC 43:XIX.519.C.11 and LAC 43:XIX.515.F.1.

36) The Eagle Oil, LLC permit application failed to provide monitoring devices which will monitor each load of incoming waste prior to acceptance.

Review of Section K and Z in the Eagle Oil, LLC permit application confirms compliance with LAC 43:XIX.543 (Receipt, Sampling and Testing of Exploration and Production Waste).

37) The Eagle Oil, LLC permit application failed to provide specific details about potential short and long term impacts.

On page 9 of the Eagle Oil, LLC (Eagle) permit application response to IT Questions, Eagle provides short term and long term effects.

38) There is no monitoring in place to assure that Eagle is strictly following their operations plan.

The Office of Conservation requires each Commercial Class II Injection well facility to undergo a comprehensive inspection, which includes a mechanical integrity test for each injection well, at a minimum every 6 months.

In accordance with LAC 43:XIX.517 (Permit Compliance Review) a commercial facility permit shall be reviewed at least once every five years to determine compliance with applicable permit requirements and conditions. This process includes a comprehensive surface facility inspection.

Review of Section K of the Eagle Oil, LLC (Eagle) permit application confirms compliance with the Daily Monitoring Log (UIC 21) in accordance with LAC 43:XIX.539.A.

Review of Section K of the Eagle permit application confirms compliance with monthly waste receipt reporting (UIC 19) in accordance with LAC 43:XIX.545.K.

39) The proposed Eagle Oil, LLC facility will negatively impact wildlife because Bald Eagles were spotted near the facility.

On page 30 of the Eagle Oil, LLC (Eagle) permit application response to IT Questions, Eagle states “According to the US Fish and Wildlife Service, Environmental Conservation Online (mapping)

System, the proposed facility will not be located in an area designated as critical habitat. Attached are a USFWS maps of Louisiana and the St. Landry Parish area showing critical habitat for threatened and endangered species. No areas near St. Landry Parish are noted.”

The Office of Conservation has found the above noted response acceptable to address this question.

40) The Eagle Oil, LLC proposed facility is proposing a process of flowing the liquid through tanks which have hazardous materials.

LAC 43:XIX.501, definition of Exploration and Production Waste (E&P Waste), states “drilling wastes, salt water, and other wastes associated with the exploration, development, or production of crude oil or natural gas wells and which is not regulated by the provisions of, and, therefore, exempt from the Louisiana Hazardous Waste Regulations and the Federal Resource Conservation and Recovery Act, as amended.”

Section K, page 1, of the Eagle Oil, LLC permit application details the E&P waste types to be processed, stored, and injected at the proposed facility in accordance with LAC 43:XIX.519.C.11 and LAC 43:XIX.515.F.1.

41) The Eagle Oil, LLC permit application failed to provide their operation from A to Z from the well site to the final disposal of the fluid at the disposal facility.

On page 23 of the Eagle Oil, LLC (Eagle) permit application response to IT Questions, Eagle provided a flow chart of the process for the arrival of new waste / site operations.

Review of Section K (Waste Management and Operations Plan) of the Eagle application confirms compliance with LAC 43:XIX.519.C.11, which requires a detailed E&P waste management and operations plan that includes, but is not limited to the proposed method of operations of the facility – and procedures for the receipt, storage, treatment and/or disposal of E&P wastes.

42) The Eagle Oil, LLC permit application detailed that soil testing and remediation of the site to 29-B standards is not part of their closure plan. The applicant must be required to test and remediate to meet these standards.

Review of Section N of the Eagle Oil, LLC permit application confirms compliance with LAC 43:XIX.519.C.14.

- 43) The application failed to comply with LAC 43:XIX.507.A.4 because the variable depth of the Chicot aquifer was not considered and the thick confining clays between the base of the USDW and the top of the injection zone were not identified or addressed.**

Pursuant to LAC 43:XIX.507.A.4, the injection and confining zones were evaluated by using the nearest well with an electric log. In well Serial Number 149320, the USDW was determined to be at 1,640', the top of the injection zone is determined to be at 2,170', and the bottom of zone at 4,335'. Sufficient confining clays were identified (greater than 100 feet) between the base of the USDW and the top of injection zone. In accordance with 43:XIX.507.A.4.b, the requirement for the existence of adequate clay confining beds has been met.

- 44) The Office of Conservation failed to review over 40 plugged and abandoned wells within the 2 mile area of review.**

Per LAC 43:XIX.405.B.1 the applicable area of review for individual Class II Salt Water Disposal wells is a ¼ mile radius around the wellbore. No wells were identified within the ¼ mile area of review.

- 45) The Eagle Oil, LLC permit application failed to detail the injection pressure for injection of E&P waste.**

The Maximum Allowable Surface Injection Pressure (MASIP) is determined after the well is completed and during the final review, prior to issuance of a Permit to Inject. Calculation of the MASIP is based on the depth of the uppermost perforation and the weight of the fluid. Per IMD Policy No. 1999-03, "The Maximum Allowable Surface Injection Pressure (MASIP) shall not exceed 90 percent of the calculated fracture pressure of the injection zone based on Eaton's Correlation". The injection pressures for Class II SWD wells is set by the Office of Conservation, not the applicant.

- 46) The application failed to consider the correlation between injection wells and earthquakes. The US Geological Survey found that wastewater disposal wells were the main cause of an increase in earthquakes throughout the central United States.**

The referenced increase in earthquakes related to injection wells in the central United States has mainly been focused on other regions of the country with different geology and rock types than are found in Louisiana. South central Louisiana is composed of softer clastic sediments that are less prone to earthquakes versus the hard clastic rocks found in the central United States. Although wastewater disposal by deep well injection has been practiced in Louisiana for many decades, no evidence has been found indicating that injection into these formations has resulted in earthquakes.

- 47) The application failed to demonstrate that injected E&P waste will not migrate beyond the property of the facility. The E&P waste will not be properly contained or monitored.**

Pursuant to RS 30:1 *et seq*, the state of Louisiana jurisdiction over disposal wells for the subsurface injection of waste is held by the commissioner of conservation and the Louisiana Office of Conservation. The Louisiana state Underground Injection Control Program (UIC) is a primacy program in which the USEPA delegated primary enforcement authority over subsurface injection activities granted by the federal Safe Drinking Water Act of 1974 (SDWA). In order to be granted primacy, the state of Louisiana through its UIC program has promulgated regulations at least as strict as the federal regulations and demonstrated that the Louisiana UIC program regulates subsurface injection activities at least as stringently as the federal USEPA. Pursuant to the Louisiana regulations which were derived from the federal UIC regulations, injected fluids are properly contained when restricted to the permitted injection zone. This containment is assured by proper construction of the injection well and periodic testing to ensure mechanical integrity of the well and proper emplacement of the injectate. The siting and design of the proposed injection well has been demonstrated to be in compliance with LAC 43:XIX, Chapters 4 & 5, and construction of the well and suitability of the injection zone must be verified prior to issuance of a Permit to Inject.

- 48) Based on deficiencies identified by the geologic section of the Office of Conservation, information provided by the applicant was inaccurate and lacking.**

The response items to the geologic notice of deficiencies were reviewed by a qualified staff geologist experienced with commercial application review and found to be adequately addressed per the requirements of LAC 43:XIX, Chapters 4 and 5.

- 49) The technical details of the injection well were lacking, inconsistent, and inaccurate. The applicant failed to be familiar with the required information.**

Any missing, inconsistent or inaccurate information identified during the technical review has been resolved through notices of deficiencies and corresponding responses and/or revisions. This application has been found satisfactory per the requirements of LAC 43:XIX:405.

- 50) The application lacks a thorough analysis on the proposed disposal zones capacity to adequately handle the proposed and future disposal volume, as well as the environmental consequences of a failure of the injection zone to accommodate this hazardous substance.**

Per IMD Policy No. 1999-03, this Office regulates the Maximum Surface Injection Pressure "in order to prevent hydraulic fracturing outside the approved injection zone and contamination of the USDW with injected fluids." Except in rare instances, the Office of Conservation regulates the injection zone by limiting the injection pressures which in turn limits the injection volumes. For

this application, it has been determined that the appropriate regulatory control to limit the disposal capacity and ensure confinement of the injected fluids to the injection zone is the MASIP.

51) The application failed to provide a leak testing and groundwater monitoring program.

Per LAC 43:XIX:419, disposal wells must demonstrate mechanical integrity at least once every five years to ensure the absence of significant leaks. Due to the construction, operational, and testing requirements for Class II SWD wells, a groundwater monitoring plan is not a requirement of LAC 43:XIX.Chapter 4.

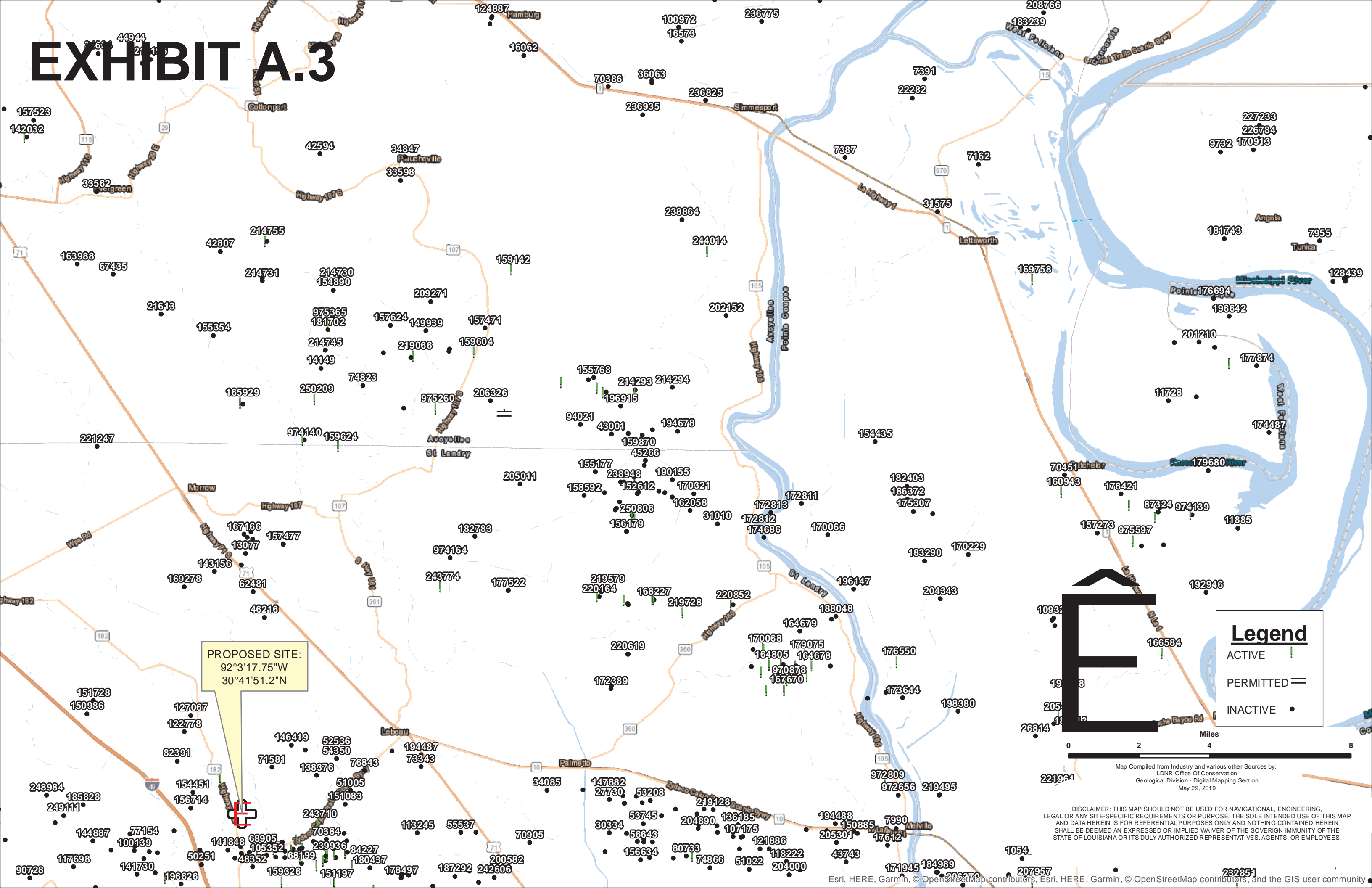
52) Well borings near the vicinity of the site demonstrates that the Chicot Aquifer varies to a depth of around 30', which would require more investigation to be protective of the aquifer in accordance with LAC 43:XIX.Chapter 5.

The base of the Underground Source of Drinking Water, which includes the entirety of the Chicot aquifer, has been identified in the nearest well with an electric log at 1,640'. The proposed injection will have surface casing set from surface to 2000' which will ensure that the Chicot and other fresh water aquifers are protected.

53) The application failed to meet LAC 43:XIX.Chapter 5 because the combining clays between the base of the Chicot aquifer and the top of the injection zone are about 100' thick.

The closest logged offset well to the proposed well, the David Mayeaux, et ux SWD No. 001, has 100' or more of clay between the Chicot aquifer and the top of the injection zone. Per 43:XIX.507.A.4.b, the requirements for the existence of adequate clay confining beds have thus been met.

EXHIBIT A.3



PROPOSED SITE:
92°3'17.75"W
30°4'51.2"N

Legend

- ACTIVE — (green vertical line)
- PERMITTED — (black horizontal line)
- INACTIVE • (black dot)



Map Compiled from Industry and various other Sources by:
LDNR Office of Conservation
Geological Division - Digital Mapping Section
May 29, 2019

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