DRAFT ENVIRONMENTAL ASSESSMENT

June 15, 2025

Waste Management Bureau
Montana Department of Environmental Quality

PROJECT/SITE NAME: CHS Laurel Refinery	
APPLICANT/COMPANY NAME: CHS Inc. Laurel Refinery	
PROPOSED PERMIT/LICENSE NUMBER: MTHWP-25-01	
LOCATION: Section 15 and 16, Township 2 South, Range 24 East	**COUNTY:** Yellowstone
PROPERTY OWNERSHIP: **FEDERAL** ____ **STATE** ____ **PRIVATE** __X__	

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1. OVERVIEW OF PROPOSED ACTION

1.1. AUTHORIZING ACTION

Under the Montana Environmental Policy Act (MEPA), Montana agencies are required to prepare an environmental review for state actions that may have an impact on the human environment. The Proposed Action is considered to be a state action that may have an impact on the human environment and, therefore, the Department of Environmental Quality (DEQ) must prepare an environmental review. This Environmental Assessment (EA) will examine the proposed action and alternatives to the proposed action and disclose potential impacts that may result from the proposed and alternative actions. DEQ will determine the need for additional environmental review based on consideration of the criteria set forth in Administrative Rules of Montana (ARM) 17.4.608.

1.2. DESCRIPTION OF DEQ REGULATORY OVERSIGHT

DEQ implements the hazardous waste management in Montana as set forth in the Administrative Rules of Montana (ARM), Title 17, Chapter 53, Sub-Chapters 1 through 12. Under the Montana Hazardous Waste Act (MHWA), DEQ establishes a management control system, including permitting, which assures the safe and proper management of hazardous wastes from the moment of their generation through each state of management until their ultimate destruction and disposal (ARM 17.53.101).

Federal regulations for hazardous waste management are set forth in Title 40 of the Code of Federal Regulations (CFR), Parts 124 and 260 through 279, and are incorporated by reference in the ARM. For ease of reading this document, when federal regulations under Title 40 of the CFR have been incorporated by reference into the ARM, only the federal citation is used.

1.3. PROPOSED ACTION

The applicant has applied for a hazardous waste permit under the MHWA for the post-closure care of a closed Land Treatment Unit (LTU) known as the Old Landfarm (OLF) and implementation of facility-wide corrective action at the CHS Inc. Laurel Refinery (site). The site's current hazardous waste permit number is MTHWP-14-02. The proposed action would be located on private land in Laurel, Montana. All information included in this EA is derived from the permit application, discussions with the applicant, analysis of aerial photography, topographic maps, and other research tools.

Table 1. Summary of Proposed Action

Proposed Action	
General Overview	The proposed reissuance of the site's permit will contain requirements for the post-closure care of a closed Land Treatment Unit and implementation of facility-wide corrective action. The OLF is approximately 18 acres in size including roads and berms.

Site Info	This site has been in operation since the 1930s. The site currently produces about 60,000 barrels per day of refined petroleum hydrocarbons products. Refinery operations are conducted on approximately 100 of 350 acres owned by CHS, all of which are zoned for heavy industrial use. The remaining acreage consists of administrative offices and green space. Adjacent property use is residential, light industrial, and agricultural. The Yellowstone River borders a portion of the southern property boundary.
Duration & Hours of Operation	***Construction:*** No construction is anticipated. ***Operation:*** The refinery operates 24-hours a day. Generally, remediation work is conducted during daylight hours.
Estimated Disturbance	All facility-wide corrective action monitoring locations and LTU activities are already established. Any future disturbance to the physical area of the OLF must be approved by DEQ. Extensive changes to permit conditions would require a permit modification and another environmental assessment.
Construction Equipment	Monitoring well drilling rigs, passenger vehicles, shovels, excavators, loaders, haul and dump trucks, dozers and graders, and other types of smaller equipment may be used for facility-wide corrective action.
Personnel Onsite	***Construction:*** No additional construction personnel are anticipated. ***Operation:*** Approximately five CHS personnel and six contractors are anticipated each day to perform corrective action and site maintenance activities.
Location and Analysis Area	***Location****:* 803 Highway 212 S. Laurel, Montana 59044 ***Analysis Area****:* The area being analyzed as part of this environmental review includes the immediate project area (Figure 1).

The applicant is required to comply with all applicable local, county, state, and federal requirements pertaining to the following resource areas.	
Air Quality	Excavation of remediation wastes during facility-wide corrective action may cause dust emissions.
Water Quality	Groundwater sampling to monitor groundwater contamination is required in the hazardous waste permit. Groundwater quality is compared to the Montana Numeric Water Quality Standards set forth by Circular DEQ-7. The site also uses the U.S. Environmental Protection Agency's (EPA) Regional Screening Levels (RSLs) for tap water to monitor groundwater quality.
Erosion Control and Sediment Transport	The stormwater management system including berms and run-off control would remain in place in the proposed permit reissuance.
Solid Waste	During facility-wide corrective actions, the site will generate remediation waste such as purge water and soil from borings. The site will characterize all solid waste to determine if it is a hazardous waste.
Hazardous Substances	This is a hazardous waste site; the OLF was used to treat refinery wastes from 1965 to 1988. Areas of the refinery have been contaminated with hazardous constituents. In addition, some of the groundwater at the refinery contains light non-aqueous phase liquid (LNAPL) including beneath the OLF. These areas of contamination require remediation and are addressed by corrective action required in the permit.

	Hazardous substances are used on site including gasoline and diesel in equipment and vehicles during permit required activities.

Cumulative Impact Considerations	
Past Actions	In 1991, the State of Montana issued a hazardous waste permit for operation and maintenance, closure, and post-closure care of the site's two LTUs, the New Landfarm (NLF) and OLF. The LTUs were used to treat refinery wastes from 1965 to 1988. Concurrently, EPA issued CHS a corrective action permit under the Hazardous and Solid Waste Amendments (HSWA) of 1989 to the Resource Conservation Recovery Act (RCRA). Corrective action requirements of the EPA permit were replaced by Montana-issued hazardous waste permit, MTHWP-02-02, and the current permit. The site began closure of both units in 1991. During closure, soils were excavated, and treated at the LTUs until concentrations of hazardous constituents in the soil met permit standards. In 1998, CHS installed a barrier wall of bentonite at the facility's downgradient property boundary and LNAPL recovery wells to prevent off-site migration of groundwater contamination. In 2002, the permit was reissued and the OLF was designated as a Corrective Action Management Unit (CAMU), which allowed land treatment of remediation wastes generated as a result of facility-wide cleanup activities. The site, to date, has not used the OLF to treat remediation waste. In 2005, the permit was modified to include revisions on the closure requirements of the NLF. Risk-based clean closure of the NLF was approved by DEQ in 2006. The site closed the NLF to standards which do not require post-closure care. In 2012, CHS submitted an application for a second reissuance of its hazardous waste permit. within the regulatory timeframe. The permit was reissued in 2014. The 2014 permit allowed for the surface of the OLF to be used as a flare. The OLF was closed in 2015 and is now in post-closure care. In 2024, CHS submitted an application for a third reissuance of its hazardous waste permit. The application was submitted within the regulatory timeframe and has been determined to be complete by DEQ.
Present Actions	The permit reissuance would contain requirements for the post-closure care of the closed LTU and implementation of facility wide corrective action. The permit includes conditions requiring the continued monitoring and maintenance of the OLF and facility-wide corrective action.

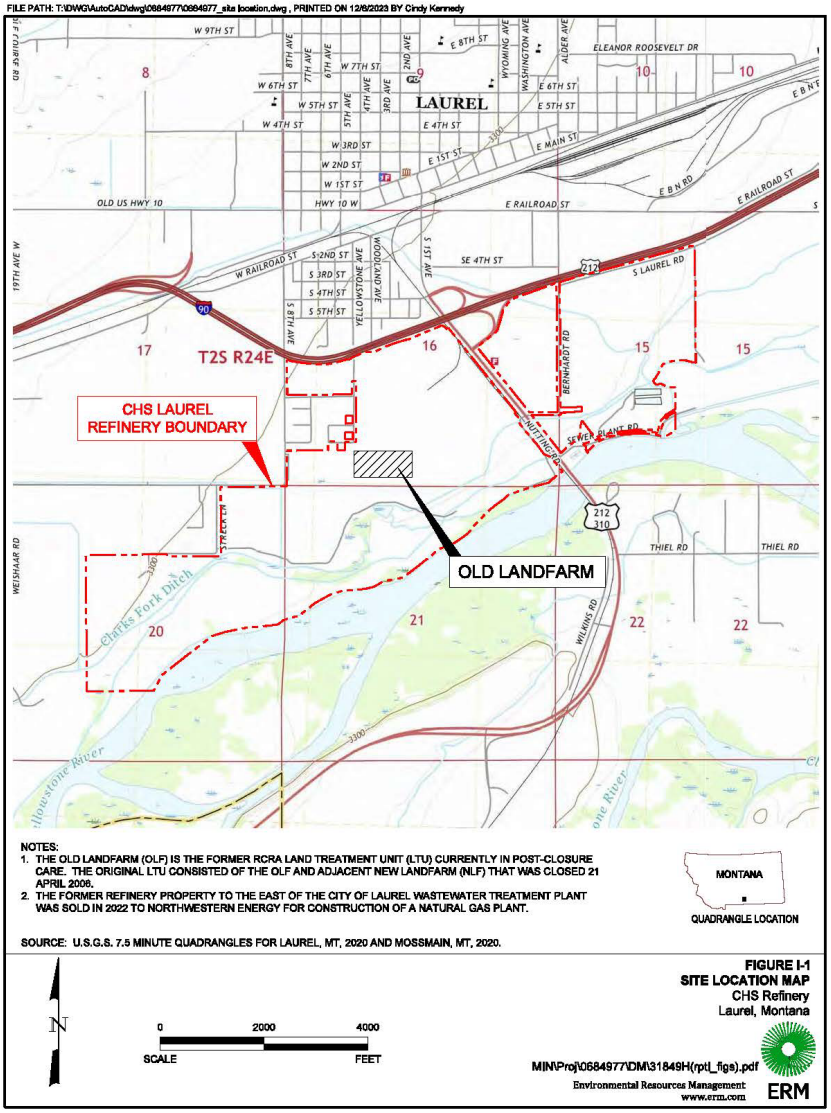
Related Future Actions	The site would be reissued a hazardous waste permit every ten years if a renewal application is submitted. Post-closure care and facility-wide corrective action would continue, which includes soil and groundwater monitoring.

1.4. PURPOSE, NEED, AND BENEFITS

DEQ's purpose in conducting this environmental review is to reissue CHS Inc. Laurel Refinery's permit to conduct post-closure care and facility-wide corrective action. DEQ's action on the permit application is governed by § 75-10-406, et seq. Montana Code Annotated (MCA) and the ARM 17.53.1201, et seq.

The applicant's purpose and need, as expressed to DEQ in seeking this action, is to conduct post-closure care of a closed LTU and implement facility-wide corrective action.

Figure 1. General Location of the Proposed Project



1.5. OTHER GOVERNMENTAL AGENCIES AND PROGRAMS WITH JURISDICTION

The proposed action would be located on land currently used as a petroleum refinery. All applicable local, state, and federal rules must be adhered to, which may also include other local, state, federal, or tribal agency jurisdiction.

Other governmental agencies which may have overlapped, or additional jurisdiction include but may not be limited to: the local City where the facility operates, the local County Commission or local County Planning Department (zoning), local County Weed Control Board, Occupational Safety and Health Administration (OSHA), DEQ Air Quality Bureau, and DEQ Water Protection Bureau (groundwater and surface water discharge; stormwater), Department of Natural Resources and Conservation (DNRC), Montana Department of Transportation, local County (road access), and the EPA.

2. EVALUATION OF AFFECTED ENVIRONMENT AND IMPACT BY RESOURCE

The impact analysis will identify and evaluate direct and secondary impacts to the physical environment and human population in the area to be affected by the proposed project. *Direct impacts* occur at the same time and place as the action that causes the impact.

Secondary impacts are a further impact to the Montana environment that may be stimulated, induced by, or otherwise result from a direct impact of the action (ARM 17.4.603(18)). Where impacts would occur, the impacts will be described in this analysis. the analysis discloses environmental impacts, these are proximate impacts pursuant to 75-1-201(1)(b)(iv)(A), MCA.

Cumulative impacts are the collective impacts on Montana's environment within the borders of Montana of the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location and generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact statement evaluation, or permit processing procedures. The projects identified in Table 1 were analyzed as part of the cumulative impacts assessment for each resource.

The duration is quantified as follows:

- **Construction Impacts (short-term):** These are impacts to the environment during the construction period.

- **Operation Impacts (long-term)**: These are impacts to the environment during the operational period.

The intensity of the impacts is measured using the following:

- **No impact**: There would be no change from current conditions.

- **Negligible**: An adverse or beneficial effect would occur but would be at the lowest levels of detection.

- **Minor**: The effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.

- **Moderate**: The effect would be easily identifiable and would change the function or integrity of the resource.

- **Major**: The effect would alter the resource.

2.1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE

The refinery and contiguous property owned by CHS Inc. Laurel Refinery is located approximately 0.5 mile south of downtown Laurel, Montana and covers approximately 350 acres along the northern bank of the Yellowstone River. The valley trends east-northeast, parallel to the river and is bordered on its northern and southern sides by low hills and escarpments of sedimentary bedrock. The regional geology consists of alluvial material deposited by the Yellowstone River. The site is bisected from northwest to southeast by U.S. Highway 212 and the Burlington Northern Railroad which owns a right of way through the central portion of the site. Land adjacent to the site consists of a mixture of urban, light industrial, and agricultural/livestock uses.

The City of Laurel comprises a mixture of residential, agricultural, and light industrial property north of the site. The Yellowstone River is bound on the north by high cliffs comprised of Upper Cretaceous Eagle Sandstone and on the south by low hills underlain by the Cretaceous Colorado Shale. The river valley is relatively flat.

Direct Impacts

Surface and subsurface soil has been impacted by historical industrial practices at the refinery. Permit conditions include requirements for remediation of impacted soils where accessible, land use restrictions for soils which are not accessible, and best management practices to ensure worker protection from exposure to contaminated soils. Therefore, facility-wide corrective action may result in minor impacts to geology and soil quality, stability, and moisture. Those impacts should result in an improvement to soil quality by reducing hazardous constituents in soil.

Secondary Impacts

No secondary impacts to geology and soil quality, stability, and moisture are anticipated.

Cumulative Impacts

Minor cumulative impacts to geology and soil quality, stability, and moisture are anticipated because soil remediation would continue under the proposed permit such as excavation and removal with institutional controls and engineering controls (i.e., capping).

2.2. WATER QUALITY, QUANTITY, AND DISTRIBUTION

Principal hazardous constituents (PHC) include volatile organic compounds (VOCs), inorganics, and dissolved polycyclic aromatic hydrocarbons (PAHs). These PHCs have been detected in groundwater beneath the site and the OLF. Some of the areas at the site also contain LNAPL in the groundwater. Through extensive groundwater monitoring, the site has taken action to prevent off-site migration within the refinery and the refinery property boundary.

With the established groundwater monitoring program, groundwater would continue to be closely monitored to ensure groundwater is not further degraded on-site and ensure groundwater migrating past the facility boundary would not contain hazardous constituents above acceptable risk-based

groundwater protection standards.

The site is approximately 528 feet from the Yellowstone River. The groundwater flows in a southeasterly direction during most of the year. Groundwater occurs under both the water table and artesian conditions in the alluvial basal sands and gravels. The aquifer is recharged by precipitation events and from local and regional irrigation. Saturated thicknesses of the alluvium ranges from 5 feet near the Yellowstone River to nearly 20 feet in the northern portion of the site, and depends on seasonal, irrigation and, river stage variations. The groundwater leaving the site may eventually discharge in the Yellowstone River downgradient of the refinery.

Direct Impacts

Groundwater has been impacted by historical industrial practices at the site. Permit conditions include requirements for subsurface soil and groundwater sampling, and maintenance of groundwater remediation technologies. Should soil and/or groundwater monitoring indicate migration of constituents, CHS must implement corrective measures to remediate the contamination and prevent further migration required in the permit. Continuation of groundwater remediation should result in the reduction of hazardous constituents over the life of the permit. Therefore, impacts to water quality, quantity, and distribution would be minor.

Secondary Impacts

No secondary impacts to water quality, quantity, and distribution are anticipated.

Cumulative Impacts

Minor cumulative impacts to water quality, quantity, and distribution are anticipated, because this permit would continue to require corrective action of groundwater which should result in the reduction of hazardous constituents.

2.3. AIR QUALITY

Excavation of remediation wastes during facility-wide corrective action may cause dust emissions during dry seasons if proper management techniques have not taken place. Releases could also occur at open-topped units which manage wastes containing volatile constituents or at units which discharge emissions. However, release to the air from open-topped units at the site are usually localized emissions such as the wastewater treatment units. The site will ensure that the excavation of remedial waste taking place is protective of human health and the environment.

Direct Impact

DEQ would require that work plans include air quality monitoring and steps to correct impacts, as necessary. The site does have a Montana Air Quality Permit, but it is not part of the hazardous waste permit. Therefore, impacts to air quality are anticipated to be minor.

Secondary Impacts

No secondary impacts to air quality are anticipated.

Cumulative Impacts

Remediation occurred previously and would continue under the proposed permit; therefore, minor cumulative air quality impacts are possible.

2.4. VEGETATION COVER, QUANTITY, AND QUALITY

The site is already developed. Corrective action and monitoring activities would have little to no impact on vegetative communities.

The Montana Natural Heritage Program compiles an on-line report to classify the Grassland Systems and the Spares and Barren Systems. The site has 6% lowland/prairie grasslands and 1% bluff, badland, and dunes.

Direct Impacts

No direct impacts to vegetation cover, quantity, and quality are anticipated because the OLF is used as a staging, storage, laydown and waste management area and does not have any vegetation. The OLF area contains an impermeable cover (flare and reactor pads), and the remainder utilizes the no-cover option. The rest of the refinery, including area that are subject to facility-wide corrective action, has little to no vegetation as it is covered by asphalt, concrete, road mix, and/or equipment. The portions of the site that have existing vegetation are not anticipated to be affected by corrective action.

Secondary Impacts

No secondary impacts to vegetation cover, quantity, and quality are anticipated.

Cumulative Impacts

No cumulative impacts to vegetation cover, quantity, and quality are anticipated.

2.5. TERRESTRIAL, AVIAN, AND AQUATIC LIFE AND HABITATS

A perimeter fence has been constructed surrounding the site and at the OLF which would limit wildlife from entering. There is no substantial use of the area for important wildlife, birds or fish and the site is not located in the critical habitat of endangered species.

This site is not in the core, general or connective sage grouse habitat areas as designated by the Montana Sage Grouse Executive Order. When reviewing the Montana Natural Heritage Program, the program compiles an on-line report to classify species in the area. These would include bald eagles and great blue herons.

Direct Impacts

The permit conditions include requirements for a perimeter fence surround the facility to control entry at all times to the OLF area limiting wildlife incursion. No aquatic impacts are expected since there is no surface water on site. Therefore, no direct impacts to terrestrial, avian, and aquatic life and habitats are anticipated.

Secondary Impacts

No secondary impacts to terrestrial, avian, and aquatic life and habitats are anticipated.

Cumulative Impacts

No cumulative impacts to terrestrial, avian, and aquatic life and habitats are anticipated.

2.6. HISTORY, CULTURE, AND ARCHAEOLOGICAL UNIQUENESS

There are no known historical, archaeological, or paleontological resources present at the site, and it is not anticipated that this project would cause a shift in any unique quality of the area.

Direct Impacts

No direct impacts to history, culture, and archaeological uniqueness are anticipated.

Secondary Impacts

No secondary impacts to history, culture, and archaeological uniqueness are anticipated.

Cumulative Impacts

No cumulative impacts to history, culture, and archaeological uniqueness are anticipated.

2.7. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR, OR ENERGY

There are no industrial or potable water supply wells on the site property. Review of Montana DNRC records indicate no downgradient wells are in use between the CHS Inc. Laurel Refinery and the Yellowstone River. The site would be using energy consumption, primarily of local fuel supplies, in conjunction with remediation projects for facility-wide corrective action.

Direct Impacts

No direct impacts to environmental resources of land, water, or air are expected. Minor direct impacts to energy are anticipated; energy is needed to perform remediation activities.

Secondary Impacts

Continuation of corrective action activities should result in positive minor secondary impacts to land and water resources as the levels of hazardous constituents are reduced in media.

Cumulative Impacts

Minor cumulative impacts to environmental resources of land, water, air, or energy are anticipated as this permit continues maintenance activities at the OLF and facility-wide corrective action.

2.8. HUMAN HEALTH AND SAFETY

The site has a health and safety program as well as a contingency plan that would enable emergency coordinators to act quickly and efficiently to minimize human health hazards and adverse environmental effects on the site. This would be implemented when an imminent or actual incident could threaten human health or the environment.

CHS is required to adhere to all applicable state and federal safety laws. OSHA has developed rules and guidelines to reduce the risks associated with this type of labor. Few, if any, members of the public would be in immediate proximity to the project during construction or operations.

Direct Impacts

Overall, there is a minor positive impact to human health and safety, because permitted activities reduce soil and groundwater contamination and safeguards human exposure to releases of hazardous waste or hazardous constituents.

Secondary Impacts

No secondary impacts to human health and safety are anticipated.

Cumulative Impacts

In conjunction with past permitted activities, minor cumulative impacts to human health are anticipated as contamination levels in soil and groundwater improve.

2.9. SOCIOECONOMICS

The project would occur on private land. The area has a population of 7,193. Due to the presence of hazardous constituents in the soil and groundwater, the duration of this project is extensive. However, it is not anticipated that this project would disrupt native or traditional lifestyles in the communities.

This site is subject to any plans or rules set forth by local and federal government. The proposed permit would not create, move, or eliminate jobs and it will not add to the local population or require additional housing. There are no public access recreation areas bordering or accessed through the proposed site; therefore, no recreational land would be blocked by the site.

Industrial and agricultural activities would be the same as impacts from the previous hazardous waste permit. The site will not create or eliminate tax revenue from those generated by the current permit and no substantial traffic would be added to existing roads nor would it impact infrastructure in the area.

Direct Impacts

Conditions in the permit would require submittal of work plans, reports and completion certification documentation to the DEQ Hazardous Waste Program. These submittals would be reviewed by program staff. Reviews would result in resources spent on staff time for review, correspondence, and communication with CHS staff and CHS environmental consultants. Annual inspections of the land treatment unit by staff are required by a Performance Partnership Agreement between EPA and DEQ. The inspections would result in resources spent on staff time for inspections, report writing, and enforcement activities, if necessary. In addition, staff would conduct inspections during facility-wide corrective action activities.

Conditions in the permit would also require that CHS implement institutional measures to control or prevent present and future on-site use and access to contaminated soil and groundwater. CHS would be required by the permit to develop a land use control plan that would implement institutional controls to prohibit current and future use of ground and surface water and restrict land use of contaminated areas on the CHS facility. Therefore, a minor impact to socioeconomics is anticipated.

Secondary Impacts

No secondary impacts to socioeconomic are anticipated.

Cumulative Impacts

Minor cumulative socioeconomic impacts are anticipated as the activities described above continue from the existing hazardous waste permit through the proposed action.

2.10. PRIVATE PROPERTY IMPACTS

The proposed project would take place on private land owned by the applicant. DEQ's approval of CHS's hazardous waste permit would not affect the applicant's real property. DEQ has determined, however, that the permit conditions are reasonably necessary to ensure compliance with applicable requirements under the MHWA. Therefore, DEQ's approval of CHS's hazardous waste permit would not have private property-taking or damaging implications.

2.11. GREENHOUSE GAS ASSESSMENT

Issuance of this permit would authorize use of various equipment and vehicles to do excavations, drillings, inspections, gauging/recovery monitoring, operation and maintenance, and groundwater monitoring.

The analysis area for this resource is limited to the activities regulated by the issuance of CHS's hazardous waste permit which is construction and operation of post-closure care and corrective action. The amount of gasoline and diesel fuel utilized at this site may be impacted by a number of factors, including seasonal weather impediments and equipment malfunctions. To account for these factors DEQ has calculated the range of emissions using a factor of +/- 10 of the applicant's estimate.

For the purpose of this analysis, DEQ has defined greenhouse gas (GHG) emissions as the following gas species: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and many species of fluorinated compounds. The range of fluorinated compounds includes numerous chemicals which are used in many household and industrial products. Other pollutants can have some properties that also are similar to those mentioned above, but the EPA has clearly identified the species above as the primary GHGs. Water vapor is also technically a greenhouse gas, but its properties are controlled by the temperature and pressure within the atmosphere, and it is not considered an anthropogenic species.

The combustion of diesel fuel at the site would release GHGs primarily being carbon dioxide (CO_2), nitrous oxide (N_2O) and much smaller concentrations of uncombusted fuel components including methane (CH_4) and other volatile organic compounds (VOCs).

DEQ has calculated GHG emissions using the EPA Simplified GHG Calculator version May 2023, for the purpose of totaling GHG emissions. This tool totals carbon dioxide (CO_2), nitrous oxide (N_2O), and methane (CH_4) and reports the total as CO_2 equivalent (CO_2e) in metric tons CO_2e. The calculations in this tool are widely accepted to represent reliable calculation approaches for developing a GHG inventory. DEQ has determined EPA's Scope 1 GHG impacts as defined in the Inventory Guidance for Greenhouse Gas Emissions are appropriate under MEPA for this Proposed Action. Scope 1 emissions are defined as direct GHG emissions that occur from sources that are controlled or owned by the

organization (EPA Center for Corporate Climate Leadership). DEQ's review of Scope 1 emissions is consistent with the agency not evaluating downstream effects of other types of impacts.

This review does not include an assessment of GHG impacts in quantitative economic terms, otherwise known as evaluating the social cost of carbon. DEQ instead calculates potential GHG emissions and provides a narrative description of GHG impacts. This approach is consistent with Montana Supreme Court caselaw and the agency's discussion of other impacts in this EA. *See Belk v. Mont. DEQ*, 2022 MT 38, ¶ 29.

Operation of gasoline and diesel-fueled vehicles throughout the life of the proposed project would produce exhaust fumes containing GHGs.

The applicant estimates that between approximately 1,023 and 1,251 gallons of fuel would be utilized per year. To account for variability due to the factors described above, DEQ has calculated the range of emissions using a factor of +/- 10% of the applicant's estimate. Using the EPA simplified GHG Emissions Calculator for mobile sources, between 9,900 and 12,100 kilograms of CO_2e would be produced per year.

Secondary Impacts

GHG emissions contribute to changes in atmospheric radiative forcing, resulting in climate change impacts. GHGs act to contain solar energy loss by trapping longer wave radiation emitted from the Earth's surface and act as a positive radiative forcing component (BLM 2021).

Per EPA's website "Climate Change Indicators", the lifetime of carbon dioxide cannot be represented with a single value because the gas is not destroyed over time. The gas instead moves between air, ocean, and land mediums with atmospheric carbon dioxide remaining in the atmosphere for thousands of years, due in part to the very slow process by which carbon is transferred to ocean sediments. Methane remains in the atmosphere for approximately 12 years. Nitrous oxide has the potential to remain in the atmosphere for about 109 years (EPA, Climate Change Indictors). The impacts of climate change throughout South-Central Montana include changes in flooding and drought, rising temperatures, and the spread of invasive species (BLM 2021).

Cumulative Impacts

Montana recently used the EPA State Inventory Tool (SIT) to develop a greenhouse gas inventory in conjunction with preparation of a possible grant application for the Community Planning Reduction Grant (CPRG) program. This tool was developed by EPA to help states develop their own greenhouse gas inventories, and this relies upon data already collected by the federal government through various agencies. The inventory specifically deals with carbon dioxide, methane, and nitrous oxide and reports the total as CO_2e. The SIT consists of eleven Excel based modules with pre-populated data that can be used with default settings or in some cases, allows states to input their own data when the state believes their own data provides a higher level of quality and accuracy. Once each of the eleven modules is filled out, the data from each module is exported into a final "synthesis" module which summarizes all of the data into a single file. Within the synthesis file, several worksheets display the output data in a number of formats such as GHG emissions by sector and GHG emissions by type of greenhouse gas.

DEQ has determined the use of the default data provides a reasonable representation of the greenhouse gas inventory for the various sectors of the state, and the estimated total annual

greenhouse gas inventory by year. The SIT data from EPA is currently only updated through the year 2021, as it takes several years to validate and make new data available within revised modules. DEQ maintains a copy of the output results of the SIT.

DEQ has determined that the use of the default data provides a reasonable representation of the GHG inventory for all of the state sectors, and an estimated total annual GHG inventory by year. At present, Montana accounts for 47.77 million metric tons of CO_2e based on the EPA SIT for the year 2021. This project may contribute up to 11.0 metric tons per year of CO2e. The estimated emission of 11.0 metric tons of CO2e from this project would contribute 0.000023% of Montana's annual CO2e emissions.

GHG emissions that would be emitted as a result of the proposed activities would add to GHG emissions from other sources. The No Action Alternative would contribute less than the Proposed Action Alternative of GHG emissions. The current land use of the area is an active refinery facility.

3. DESCRIPTION OF ALTERNATIVES

No Action Alternative: In addition to the proposed action, DEQ must also considered a "no action" alternative. The "no action" alternative would deny the approval of the hazardous waste permit reissuance. If the permit reissuance is denied, the applicant would lack the authority to conduct the proposed activity. Any potential impacts that would result from the proposed action would not occur. The no action alternative forms the baseline from which the impacts of the proposed action can be measured.

If the applicant demonstrates compliance with all applicable rules and regulations required for approval of the renewal application, DEQ does not have a legal reason to not issue the permit. The "no action" alternative is not reasonable. The no action alternative would not comply with the requirements of the regulations. If DEQ takes no action on CHS Laurel Refinery's permit reissuance application, legal action against DEQ from CHS would be expected. DEQ would also anticipate legal action from the EPA for failure to issue a permit renewal, unless there was a regulatory justification.

Other Reasonable Alternative(s): Since CHS completed a permit reissuance application, the only reasonable alternative is to accept or deny their permit request. Therefore, no other alternatives were considered.

4. CONSULTATION

No substantive issues and/or concerns related to the proposed permit renewal were identified. DEQ consulted with CHS Inc. Laurel Refinery and their consultants.

5. SIGNIFICANCE OF POTENTIAL IMPACTS AND NEED FOR FURTHER ANALYSIS

When determining whether the preparation of an environmental impact statement is needed, DEQ is required to consider the seven significance criteria set forth in ARM 17.4.608, which are as follows:

- The severity, duration, geographic extent, and frequency of the occurrence of the impact;
- The probability that the impact will occur if the proposed action occurs; or conversely, reasonable

assurance in keeping with the potential severity of an impact that the impact will not occur;

- Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts – identify the parameters of the proposed action;
- The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values;
- The importance to the state and to society of each environmental resource or value that would be affected;
- Any precedent that would be set as a result of an impact of the proposed action that would commit the department to future actions with significant impacts or a decision in principle about such future actions; and
- Potential conflict with local, state, or federal laws, requirements, or formal plans.

6. PUBLIC INVOLVEMENT

The public, including interested citizens, DEQ, Environmental Protection Agency (EPA), other government agencies, and the applicant are provided forty-five (45) calendar days to review and comment on the draft EA and proposed action. The draft permit and EA are available for review on DEQ's website at https://deq.mt.gov/public/publiccomment.

They may also be reviewed during business hours at:

Location Information	*Review Hours*
Montana Department of Environmental Quality Waste Management Bureau 1225 Cedar Street Helena, Montana 59601 (406) 444-5300	Monday through Friday 8:00 am – 5:00 pm

Comment Period

The comment period is from June 15, 2025 through July 31, 2025.

Written Comments

Comments must be submitted in writing no later than July 30, 2025 to:

Alexis Frost
Hazardous Waste Specialist
Montana Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901

Comments may also be submitted via email to deqhazwaste@mt.gov. Please use the subject line *CHS Laurel Refinery Permit Renewal.*

7. CONCLUSIONS AND FINDINGS

The severity, duration, geographic extent, and frequency of the occurrence of the primary, secondary, and cumulative impacts associated with the proposed action would be limited.

DEQ has not identified any significant impacts associated with the proposed action for any environmental resources. Approving the permit renewal will not set a precedent that commits DEQ to future actions with significant impacts or decisions in principle about such future actions. DEQ's issuance of the permit renewal does not set a precedent for DEQ's review of other proposed remedies or permit applications. A decision of the appropriate level of environmental review is made based on a case-specific consideration of the criteria, set forth in ARM 17.4.608.

DEQ does not believe the proposed action has any growth-inducing or growth-inhibiting aspects. The proposed action does not conflict with any local, state, or federal laws, requirements, or formal plans. Based on a consideration of the criteria set forth in ARM 17.4.608, the proposed action is not predicted to significantly impact the quality of the human environment. Therefore, preparation of an EA is determined to be the appropriate level of environmental review under the Montana Environmental Policy Act (MEPA).

Environmental Assessment and Significance Determination Prepared By:

Alexis Frost
Hazardous Waste Specialist

Environmental Assessment Reviewed By:

Ryan Foley, Denise Kirkpatrick, Craig Jones, Wally Jemmings

Approved By:

Denise A. Kirkpatrick
Hazardous Materials Section Supervisor
Department of Environmental Quality

8. REFERENCES

MTHWP-14-02. Montana Department of Environmental Quality. Montana Hazardous Waste Permit Number MTHWP-14-02 Issued to CHS Inc. for the CHS Laurel Refinery.

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CHS Inc. Laurel Refinery (1992). Current Conditions Report Volume I Technical Report.

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EPA Center for Corporate Climate Leadership, Scopes 1, 2 and 3 Emissions Inventorying and Guidance | US EPA.

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Montana Sage Grouse Habitat Conservation Program Map. https://sagegrouse.mt.gov/ProgramMap