SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization, or compensatory mitigation measures would address the probable significant impacts or if an environmental impact statement would be prepared to further analyze the proposal.

Instructions for applicants

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. **You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown.** You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to **all parts of your proposal,** even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that would help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for lead agencies

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B, plus the Supplemental Sheet for Nonproject Actions (Part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in "Part B: Environmental Elements" that do not contribute meaningfully to the analysis of the proposal.

A. Background Find help answering background questions

1. **Name of proposed project, if applicable:**

   Pacific Green Fertilizer Plant

2. **Name of applicant:**

   Atlas Agro North America Corp

3. **Address and phone number of applicant and contact person:**

   723 The Parkway
   Richland, WA 98352

   Attn: Derek VanArsdale
   derek.vanarsdale@atlasagro.ag

4. **Date checklist prepared:**

   January 29, 2024

5. **Agency requesting checklist:**

   City of Richland

6. **Proposed timing or schedule (including phasing, if applicable):**

   Construction is anticipated to start following completion of final engineering and receipt of required permits. The anticipated start is 2025 with construction estimated to be complete in 3 years.

7. **Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

   Atlas Agro may choose to utilize rail for product export at a future date. Rail, as described in this checklist, is proposed for raw material import and rail tracks and railcar unloading facilities are included in this evaluation. If rail for export is added at a future date, then an evaluation of potential impacts would be assessed at that time in coordination with the SEPA Lead Agency. No other future expansions or additions are proposed for the project.

8. **List any environmental information you know about that has been prepared, or would be prepared, directly related to this proposal.**

   The following environmental documents have been prepared for this project:

- Critical Areas Report (HDR 2024a)
- Cultural Resources Report (HDR 2024b)
- Fire and Explosion Risk Assessment (FERA) (Atlas Agro 2023a; available upon request)
- Geotechnical Investigation (GN Northern 2023)
- Hazard Identification (HAZID)/Environmental Identification (ENVID) Report (Atlas Agro 2023b; available upon request)
- Hazard and Operability (HAZOP) & Safety Integrity Level (SIL) Determination Report (Atlas Agro 2023c; available upon request)
- Phase I Environmental Site Assessment (HDR 2023)
- Phase I Environmental Site Assessment Addendum (HDR 2024c)
- Predictive Noise Study Report (Cecor 2023)
- Quantitative Risk Assessment (QRA) (Atlas Agro 2023d; available upon request)
- Rail Transportation Analysis (HDR 2024d)
- Traffic Impact Analysis (HDR 2024e)

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

There are no applications pending for governmental approvals of other proposals directly affecting the property or the proposed project.

10. List any government approvals or permits that would be needed for your proposal, if known.

In order to implement the proposal, Atlas Agro may require the following approvals or permits:

Permit/Approval	Authorizing Agency
FEDERAL	
National Environmental Policy Act	US Department of Agriculture
Endangered Species Act Section 7 Consultation	United States Fish and Wildlife Service (USFWS)
Migratory Bird Treaty Act	USFWS
Interconnection Request	Bonneville Power Administration
STATE/REGIONAL	
National Historic Preservation Act Section 106 Consultation	WA Dept of Archeological and Historic Preservation
National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit	WA Dept of Ecology
NPDES Industrial Stormwater General Permit	WA Dept of Ecology
Air Discharge Permit (Notice of Construction)	Benton Clean Air Agency
Non-Road Engine Permit	WA Dept of Ecology

Permit/Approval	Authorizing Agency
LOCAL/PRIVATE	
Pre-application Conference	City of Richland
Critical Areas Review	City of Richland
SEPA Review	City of Richland
Transportation Concurrency	City of Richland
Grading Permit	City of Richland
Fire Permits	City of Richland
Commercial Construction Permit (includes Commercial Plan Review, Electrical Commercial Plan Review, Right of Way Construction Permit, Water Availability Notification, Service Request for City Utilities)	City of Richland
Sign Permit	City of Richland
Industrial Track Agreement	Columbia Rail

11. Give a brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

Atlas Agro North America Corp is proposing a fertilizer plant facility referred to as the Pacific Green Fertilizer Plant (PGF) (referred herein as project) in Richland, Washington (Attachment E, Figures 1 and 2). The project is in the Northwest Advanced Clean Energy Park, City of Richland, Benton County, Washington in a newly annexed portion of the City of Richland that was part of the Hanford Site. The overall industrial park is approximately 260 acres with the proposed project utilizing approximately 130 acres in the southern portion of the park.

The PGF would primarily produce up to 650,000 metric tons per year of zero-carbon nitrate fertilizers (as calcium ammonium nitrate (CAN 27)) developed using a hydrogen gas-based process (a description of CAN 27 and materials used in the process, are in Attachment C, Project Description). The goal of the PGF is to increase the availability of nitrogen fertilizer across the United States to reduce import costs without adding to the agriculture industry's carbon footprint.

Within the process structures the raw materials undergo a chemical process to produce the CAN 27, calcium nitrate, and ammonium nitrate solution fertilizer products that would be distributed to local and regional markets. Using zero-carbon electricity, water electrolysers convert demineralized water into hydrogen and oxygen. The hydrogen is used in the ammonia plant and the oxygen is used to improve the efficiency of the nitric acid plant. A different process uses an air separation unit to split out nitrogen from atmospheric air molecules. The nitrogen is a feedstock for the nitric acid and ammonia plants.

Within the ammonia plant, nitrogen and hydrogen are processed together at high temperatures and pressure, resulting in the creation of ammonia. About half of the created ammonia is sent to the ammonium nitrate plant and the other half to the nitric acid plant.

The nitric acid is then sent to the ammonium nitrate plant where it is combined with ammonia sent directly from the ammonia plant. Ammonia effectively neutralizes the acid and forms ammonium nitrate solution. The addition of limestone (calcium carbonate) and dolomite (calcium carbonite plus magnesium carbonate) to the ammonium nitrate creates CAN 27 and added to nitric acid creates calcium nitrate. Both are inert substances. The inert CAN 27 and calcium nitrate are then dried and sent to a granulation unit where both are processed into a granulated solid form of fertilizer. The final products are stored for shipping to customers.

The PGF would include the following elements: process units for hydrogen, ammonia and nitric acid production, water system including raw water, demineralized water, fire water, boiler water, and cooling water, air separation units, flare, check point entrances for security, administration building, fire station, equipment rooms, central control and laboratory room, storage buildings, truck loading station, rail unloading station, wastewater treatment facility, internal access roads, stormwater pond, and parking.

A detailed project description is in Attachment C and an overall site plan is in Attachment E, Figures 2 and 5.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The project is in the 260-acre Northwest Advanced Clean Energy Park, City of Richland, Benton County, Washington, at latitude 46°21'16.1"N and longitude 119°17'18.7"W (Attachment E, Figure 1). The plant would be built on approximately 130 acres in the southern portion of the industrial park. The property is legally described as follows:

- Assessors Tax Parcel No. : Portion of 110081000001004
- Zoning Classification: IL (Industrial).
- GeoID: 110081000001004
- Zip Code: 99354
- Sections 10 and 15 of Township 10 North, Range 28 East

The 130-acre section of land used to develop the plant will hereby be referred to in this document as “Project Area,” and the boundaries of parcel no. 110081000001004 will hereby be referred to as “Study Area.”

B. Environmental Elements

1. Earth Find help answering earth questions

a. General description of the site:

Circle or highlight one: Flat, rolling, hilly, steep slopes, mountainous, other:

b. **What is the steepest slope on the site (approximate percent slope)?**

According to the geotechnical report in Attachment H (GN Northern, Inc., 2023), the project site is characterized by hummocky and undulating dune topography. Existing elevations across the site range from approximately 407 feet to about 378 feet for a total site relief on the order of 30 feet. Existing native site slopes across the site are associated with the dunes that have formed from the northwesterly winds. The overall gradient across the site generally slopes to the southwest with the maximum slope at 4H:1V (25%) and the average slope much flatter. The site also slopes from the northwest and southeast corners to the center of the site where there is a gently sloping draw that trends northeast to southwest across the site.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them, and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

There is no soil survey data available from the Natural Resources Conservation Service (NRCS) Web Soil Survey for the project area. The NRCS identifies the site as the Hanford Atomic Energy Reservation, Washington (NRCS 2024).

A geotechnical investigation was conducted on the site between July and September of 2023 (GN Northern, Inc., 2023). According to the report, the site is blanketed with a variably thick cover of eolian fine sands and silts, identified as Quaternary dune sands (Qd), overlying gravel and sandy gravels with subrounded to rounded cobbles and boulders, identified as the Pasco Member of the Hanford Formation (Qhp). Across the site, the overlying sand/silt (Qd) layer varies in thickness from as little as 1.5 feet to as much as 17 feet. The underlying gravelly (Qhp) layers are discontinuous across the site and vary from sandy gravel to gravelly sand and have varying quantities of cobbles and boulders often greater than 2 feet in size. Underlying the gravelly layer (Qhp), at a depth of around 55 to 60 feet BGS, an approximately 15-foot thick, slightly cemented layer of non-plastic Silt with Sand/Sandy Silt (ML) was encountered and correlates to the Touchet Member of the Hanford Formation (Qht).

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

Tests conducted during the geotechnical investigation (GN Northern, Inc., 2023) confirmed the presence of fine-grained surficial soils that contributes to very high permeability. As a result, soils are susceptible to wind and water erosion, with most or all precipitation and snowmelt infiltrating into the soil column before generating any surface runoff. Based on the site geology and subsurface groundwater conditions, the risk of liquefaction of the site soils is very low. Given the overall flat nature of the project area, slope instability is not a concern.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

Surface grading, excavation and backfilling are anticipated for construction of the project site. The final surface elevation at the site is anticipated to be 386 feet. Based on preliminary engineering, the project would result in approximately 3,242,060 cubic feet of excavation and 5,978,080 cubic feet of backfill over the 130 acres site. Based on the geotechnical investigation (GN Northern, Inc., 2023) excavation material has been determined suitable for backfilling to minimize potential offsite disposal. Clean fill material, as needed, would be imported from an approved location determined by the contractor. If excavated soil is not suitable for use on site, it would be disposed of at an approved location determined by the contractor.

f. Could erosion occur because of clearing, construction, or use? If so, generally describe.

As described in the geotechnical report (GN Northern, Inc., 2023), the project area is generally located on a flat plateau and the potential for water erosion of the soils in this area is expected to be low due to their high permeability, but the sandy soils are susceptible to wind erosion if disturbed or left unvegetated. During construction, there is a potential for erosion to occur during clearing, grading, or excavation activities. This would be limited by adhering to the erosion and sediment control best management practices (BMPs) outlined in the stormwater pollution prevention plan (SWPPP) required by the NPDES Construction Stormwater General Permit, and dust and erosion control and suppression requirements of Chapter 16.06 of the City of Richland municipal code during construction and operations. BMPs for construction activities are described in Section B.1.h.

During operations, surfaces would be either impervious, gravel or landscaped and no soils would be left unprotected. Stormwater runoff captured and directed through the stormwater treatment system is described in Section B.3.2.c.a. No erosion is anticipated during operation.

g. About what percent of the site would be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The site is currently undeveloped with no impervious surface. The overall project area is 130 acres with the facility buildings and roads occupying approximately 80 acres of the site. The project would result in an approximate total of 31 acres of impervious surface that represents 24 percent of the overall project area.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any.

During project construction, appropriate erosion control measures would be implemented prior to clearing, grading, or excavation activities. These control measures would be identified in the project plans and construction specifications and implemented as required by the city building permits, the SWPPP, and the erosion control plan prepared in compliance with the NPDES Construction Stormwater General Permit. BMPs for construction activities would include, but not be limited to:

- development, implementation, and maintenance of a SWPPP to minimize erosion of sediments due to rainfall runoff at construction sites and to reduce, eliminate, and prevent the pollution of stormwater during construction
- installation of filter fabric fences around disturbed areas
- installation of silt traps in storm drain inlets
- installation of gravel construction entrances
- stabilization of temporary soil stockpiles and exposed soils
- regular application of water for dust control on unpaved access roads
- use of appropriate means to minimize tracking of sediment onto public roadways by construction vehicles
- designation of personnel to inspect and maintain temporary erosion and sediment control measures
- development, implementation, and maintenance of a Spill Prevention, Control and Countermeasure Plan (SPCCP) to manage potentially toxic materials associated with construction activities (e.g., equipment leakage, disposal of oily wastes, cleanup of spills, storage of petroleum products and chemicals in contained areas away from streams and wetlands)
- establishment of a communication protocol for handling spills (applicable spill response equipment and material designated in the SPCCP would be maintained at the job site)
- refueling of construction equipment and vehicles, away from surface waters whenever practical
- containment of equipment and vehicle wash water associated with construction and keeping it from draining to surface waters
- storing fuels and other potential contaminants away from excavation sites and surface waters in secured containment areas
- prevention of oil, fuels, and chemicals from discharging to surface waters and onto land where there is a potential for entry into surface waters
- conduction of regular inspections, maintenance, and repairs of fuel hoses, hydraulically operated equipment, lubrication equipment, and chemical and petroleum storage containers
- restoration of temporarily disturbed areas by establishing grass or other vegetative cover on the construction site as soon as possible after disturbance is complete or when the soil would remain unworked for greater than 30 days
- Soils, including stockpiles, would not remain exposed and unworked for more than the following time periods:
    - 30 days during the dry season (July 1st through September 30th)
    - 15 days during the wet season (October 1st through June 30th)

During operations, surfaces would be either impervious, gravel or landscaped and no soils would be left unprotected. Stormwater runoff captured and directed through the stormwater treatment system described in Section B.3.2.c.a. No erosion is anticipated during operation.

2. Air Find help answering air questions

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

During project construction, there would be emissions from internal combustion engines powering vehicles and construction equipment, welding, and other miscellaneous construction activities. All emissions would be temporary (approximately 2 years) and intermittent. Nonroad engines associated with construction would comply with applicable notification and recordkeeping requirements in Washington Administrative Code (WAC) 173-400-035.

Fugitive dust emissions would be present during site clearing and construction phases of this project; however, these emissions would be controlled through fugitive dust emission control practices in accordance with applicable air pollution control requirements in Benton Clean Air Agency (BCAA) Regulation I, Article 4, and WAC 173-400-040. Therefore, no adverse off-site air quality impacts are expected because of construction activities.

Emissions during normal operation are expected to consist of 1) particulate matter emissions from the granulator, material transfer activities, and cooling towers; 2) nitrogen oxide emissions from the nitric acid unit; 3) fossil fuel combustion air pollutant emissions from the auxiliary boiler (likely operated once per year) during maintenance shutdowns and emergency generators; and 4) internal combustion engines powering mobile personnel vehicles and product delivery trucks. Detailed potential emission calculations for all stationary emission units would be provided as part of the Notice of Construction (NOC) application that would be submitted to BCAA.

Potential emissions from facility units require approval under Washington's Minor New Source Review regulations. Maximum potential project emissions are expected to be less than both Major New Source Review thresholds and Title V air operating permit thresholds. BCAA would review and confirm that project emission units would employ Best Available Control Technology (BACT) for criteria and toxic air pollutants (tBACT) as required under WAC 173-400-113 and 173-460-040, respectively. In addition, BCAA's review of submitted air permit application materials would confirm that project emission increases would not adversely impact ambient air quality standards for criteria pollutants and Washington's human-health based regulatory thresholds for toxic air pollutants.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

In the surrounding vicinity, elevated particulate matter (dust) concentrations are of greatest concern and result from the windy and arid weather conditions in the area. These are from off-site sources, which include ongoing construction and operations from surrounding developments. These are not expected to affect the project. No sources of off-site odors are anticipated.

c. Proposed measures to reduce or control emissions or other impacts to air, if any.

Atlas Agro would prepare a fugitive dust control plan that identifies management and operational procedures (i.e., water application and other practices) to reduce fugitive dust emissions during project construction.

During operation, each emission unit would employ BACT for criteria pollutants and tBACT as required under WAC 173-400-113 and 173-460-040, including:

- Dust collectors/baghouses to reduce particulate matter emissions from the granulator and material handling activities;
- Selective catalytic reduction (SCR) to reduce NOx emissions from the nitric acid unit;
- Drift eliminators to reduce particulate matter emissions from the cooling towers;
- Purchase of emission-certified backup engines for power and firewater; and
- Paving facility roadways and implement a fugitive dust control plan to minimize fugitive dust emissions.
- Utilizing hydrogen instead of natural gas in the flare as fuel gas reduces overall carbon-based emissions.

By installing equipment and adopting practices that achieve BACT, potential facility-wide emissions are expected to be less than regulatory thresholds that would trigger major new source review and an air operating permit. The minor new source review submitted to BCAA is expected to confirm that emissions from the project would not cause or contribute to exceedance of criteria pollutant ambient air quality standards and would not exceed Washington's health-based regulatory thresholds for toxic air pollutants.

3. Water Find help answering water questions

a. Surface Water: Find help answering surface water questions

1. Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

In May 2013, the Department of Energy (DOE) completed a field survey to support a land transfer for Environmental Assessment (EA) completed for the Proposed Conveyance of Land at the Hanford Site (DOE 2015). The NEPA documents can be found on the DOE website at: EA-1915: Proposed Conveyance of Land at the Hanford Site, Richland, Washington | Department of Energy.

Based on the DOE survey, there are no surface waters or wetlands located within the immediate project site. The closest surface water is the Columbia River located approximately 0.5 miles east of the site.

HDR biologists conducted a literature and desktop review of wetlands in the survey area included reviewing the DOE field survey. The desktop review included consulting the following online applications to confirm the status of wetlands and other waterbodies within the project: City of Richland Geological Hazards and Critical Areas Map (Richland, WA, 2023c), NMFS Protected Resources App (NMFS 2023), USFWS NWI (USFWS 2023a), and the WNHP Rare Plant and Ecosystem

Locations map (WNHP 2023). HDR biologists performed a field investigation at the project in the summer of 2023. This field survey followed protocols in accordance with the *Corps of Engineers Wetland Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008). HDR confirmed that the conditions of the site are the same as described in the 2015 EA, with the site being dry and dominated by upland vegetation. Therefore, it is determined that there are no waterbodies or wetlands present within the Study Area (HDR 2024a). Additional information is in the Critical Areas Report in Attachment F.

2. **Would the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

   Because no wetlands or waterbodies were identified on the project site or within 200 feet, no in-water or over-water work would occur.

3. **Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

   No fill or dredged materials are anticipated to be placed in wetlands or waterbodies as part of the project.

4. **Would the proposal require surface water withdrawals or diversions? Give a general description, purpose, and approximate quantities if known.**

   No surface water withdrawals or diversions are anticipated as part of this project. Raw process and potable water for the project would be supplied by the City of Richland water system as described in the Project Description in Attachment C.

5. **Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

   According to the City of Richland Geological Hazards and Critical Areas map and FEMA floodplain mapping (FIRM Community Number 5302370460B), the project area is not within a floodplain (Attachment F, HDR 2024a).

6. **Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

   No surface waters are present on or immediately adjacent to the project site. As described in the Project Description in Attachment C, waste materials, wastewater, and stormwater would be collected on-site and would not be discharged off-site. Therefore no discharge of waste materials to surface waters are anticipated as part of the project.

b. Ground Water: Find help answering ground water questions

1. **Would groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the**

well. Would water be discharged to groundwater? Give a general description, purpose, and approximate quantities if known.

No groundwater withdrawals or diversions are anticipated as part of this project. Raw process and potable water for the project would be supplied by the City water system as described in the Project Description in Attachment C.

No critical aquifer recharge areas or wellhead protection areas were identified within the project area. The closest aquifer recharge area is a 10-year aquifer recharge located approximately 0.5 miles south of the project. The nearest wellhead protection area is located about 1.25 miles east of the project, on the other side of the Columbia River (Attachment F, HDR 2024a).

2. **Describe waste material that would be discharged into the ground from septic tanks or other sources, if any (domestic sewage; industrial, containing the following chemicals…; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

No waste material would be discharged into the ground from septic tanks or other sources during construction or operations. During construction, sanitary waste would be collected in portable toilets maintained and emptied by the contractor.

During operations, sanitary wastewater would be generated from domestic uses, including toilets, kitchens, and showers in the operations and administrative buildings and discharged to the City of Richland sanitary sewer system at an interconnection at Horns Rapids Road.

Precipitation from impervious surfaces and roofs, including non-contact water, would be collected and directed to a stormwater retention basin onsite. Some of the stormwater from the basin would then be routed through the on-site wastewater treatment facility to be reused inside the plant and/or treated in the on-site wastewater treatment plant. Remaining water in the stormwater basin, after treatment, would be infiltrated on-site. As stormwater would be treated it is not anticipated to affect the water quality of the groundwater.

In addition to some of the non-contact stormwater, the wastewater treatment plant is designed to treat wastewater produced during production of the final product. For water to be reused in the plant, additional treatment processes would occur so the water could be safely returned to various storage tanks in the plant. It should be noted specifically for oils that once removed, oils would be disposed off-site by an authorized handler.

A portion of treated process wastewater would not be suitable for reuse within the facility and would be discharged to the City of Richland sewer system at an interconnection at Horn Rapids Road. The facility design complies with the City of Richland code requirements regarding water quality and capacity for wastewater treatment. Solids remaining following water treatment would be collected and disposed of off-site by a qualified contractor in accordance with federal, state, and local regulations.

c. Water Runoff (including stormwater):

a) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where would this water flow? Would this water flow into other waters? If so, describe.

During construction stormwater would be captured and discharged to minimize erosion and sedimentation. BMPs developed according to the Washington State Department of Ecology's *Stormwater Management Manual for Eastern Washington* would be utilized on-site in accordance with the City of Richland grading permit and NPDES Construction Stormwater General Permit. BMPs for construction activities are described in Section B.1.h.

Following construction, the site would be stabilized, and permanent control BMPs would be implemented for stormwater management. Precipitation from impervious surfaces and roofs, including non-contact water, would be collected and directed to a stormwater retention basin on-site. Some of the stormwater from the basin would then be routed through the on-site wastewater treatment facility to be reused inside the plant and/or treated in the on-site wastewater treatment plant. Remaining water in the stormwater basin, after treatment, would be infiltrated on-site.

In addition to some of the non-contact stormwater, the wastewater treatment plant is designed to treat wastewater produced during production of the final product. There are various treatment methods that would be carried out depending on the types of waste in the water including: equalization & flow regulation; oil removal; biotreatment; sludge treatment (thickening and dewatering); and additional treatment such as reagent dosing for pH control, coagulation and flocculation polyelectrolyte, granular filtration (sand or similar) and activated carbon absorption. For water to be reused in the plant, additional treatment processes would occur so the water could be safely returned to various storage tanks in the plant. It should be noted specifically for oils that once removed, oils would be disposed off-site by an authorized handler.

b) Could waste materials enter ground or surface waters? If so, generally describe.

Construction-related waste materials could enter ground or surface waters due to accidental spills, mechanical failures, or if construction activities deviate from project specifications or permit conditions. Soils through erosion could also enter surface waters; however, BMPs would be implemented to reduce or control runoff and drainage pattern impacts during construction. BMPs for construction activities are described in Section B.1.h.

It is not anticipated that waste materials as part of the completed project would enter ground or surface waters as process water and stormwater would be captured and treated as described in Section B.3.c.a.

c) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

The project is not anticipated to affect drainage patterns within the project area or immediate vicinity. As described in Section B.3.c.a, the project would collect stormwater for treatment per the *Stormwater Management Manual for Western Washington*. The generally flat topography of the

project area and surrounding vicinity and permeability of the soil (GN Northern, Inc., 2023) indicates that precipitation generally infiltrates and drainage patterns would not be affected by the project.

d) Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any.

Erosion and sediment control BMPs would be used during construction to reduce and control stormwater runoff impacts. These BMPs would be selected in accordance with applicable local and state stormwater management requirements. Examples of typical erosion-control BMPs selected from the *Stormwater Management Manual for Eastern Washington* that would be used during construction are presented in Section B.1.h.

As described in Section B.3.c.a, stormwater would be managed by capturing and treating it onsite to meet the *Stormwater Management Manual for Eastern Washington* and Title 16 of the City of Richland code. The project would also require coverage under the Washington State Department of Ecology's NPDES Industrial Stormwater General Permit. An operations SWPPP and operations SPCCP would be developed and implemented per NPDES Industrial Stormwater General Permit and City of Richland Municipal Code (RMC) 16.06.030.

In addition, the stormwater retention pond and infiltration would occur outside of the restricted area for stormwater facilities noted in the Quitclaim Deed and First Amendment of the Quitclaim Deed (Attachment I) and would be in compliance with both the original and amendment to the deed.

4. Plants Find help answering plants questions

a. Check the types of vegetation found on the site:

- ☐ **deciduous tree: alder, maple, aspen, other**
- ☐ **evergreen tree: fir, cedar, pine, other**
- ☒ **shrubs**
- ☒ **grass**
- ☐ **pasture**
- ☐ **crop or grain**
- ☐ **orchards, vineyards, or other permanent crops.**
- ☐ **wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other**
- ☐ **water plants: water lily, eelgrass, milfoil, other**
- ☐ **other types of vegetation**

b. What kind and amount of vegetation would be removed or altered?

The total surface area that would be cleared and grubbed for the overall project is approximately 125 acres of the overall 130-acre site. Of the shrub-steppe habitat on-site, approximately 17.75 acres would be removed as part of the site clearing. The remaining vegetation is comprised of grasses and other small shrubs.

c. List threatened and endangered species known to be on or near the site.

The City of Richland adopts the habitats and species listed as priorities identified by WDFW and the Washington Natural Heritage Program (WNHP) as the habitats and species of local importance. Review of data from the WNHP does not document any rare, threatened, or endangered plants within the project. Based on the Priority Habitat and Species (PHS) database (WDFW 2023a), there are occurrence of shrub-steppe, and biodiversity areas and corridors within the Study Area.

Based on field surveys, the shrub-steppe habitat is located within the Study Area but is degraded and does not have high functional value. The biodiversity areas and corridors recorded in the Study Area are the Columbia Plateau Regional Biodiversity Areas and Corridors, which are large and intact tracts of land (and include the Study Area as well as the surrounding landscape) that may support local populations of native species.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any.

Landscaping is being proposed on the site in accordance with RMC 23.26.060 and 23.54.160 for perimeter landscaping of industrial facilities. RMC 23.54.160 specifies that landscaping in Heavy Industrial zoning is required along the perimeter of the facility. The landscaping would include a landscape strip (approximately 10 feet wide) adjacent to the roads and planted with trees on 40-foot centers and decorative material or vegetative cover for the spaces around the trees.

Landscape areas would include an underground irrigation system to sustain the proposed vegetation planted. Landscaping material would include tree species with an average mature spread of crown of greater than 15 feet and would be a minimum of 8 feet tall and one to 1.5-inch diameter at the time of planting. Trees would be disease-resistant, drought-resistant, non-invasive species known to thrive in the project region and compliant with RMC 23.54.160.C.1 such as American Hornbeam (*Carpinus caroliniana*) as identified in the Benton County Public Utility District's tree program's list of recommended power-line friendly trees.

No indirect vegetation impacts would result from soil erosion and subsequent sedimentation. Potential construction stormwater runoff would be minimized through implementation of BMPs. In addition, the following measures would be implemented to reduce or control impacts to vegetation and native plants:

- As needed, Atlas Agro would limit construction disturbance by flagging protective areas and their applicable buffers during construction to avoid disturbance.
- Atlas Agro would develop a reseeding/restoration and weed management plan.
- BMPs to protect vegetation would be implemented; for example: Protect trees, shrubbery, and other vegetation not designated for removal from damage caused by the project construction and implement erosion control and dust emission BMPs to prevent siltation of vegetation.
- Following construction, disturbed areas would be regraded to preconstruction contours and restored to their previous agricultural use or for natural habitat, restored with a native seed mix as appropriate.

Per RMC 22.10.220, any adverse impacts to habitat functions and values requires mitigation. Because the project would impact existing shrub-steppe habitat, mitigation is required. A Mitigation Action Plan (MAP) was written as part of the DOE 2015 EA that was completed for the transfer of a portion of the Hanford Site to the Port of Benton, which included the proposed project parcel. Approximately 120 acres of land across multiple sites within the Handford Reservation were purchased for mitigation during this land conveyance (Handford Mission Integration Solutions 2022). WDFW and the City of Richland have stated that the mitigation actions in the 2015 MAP would satisfy the mitigation requirement for the proposed project. As the proposed project would impact approximately 17.15 acres of shrub-steppe habitat, approximately 25 acres of the 120 acres purchased by DOE for mitigation would be utilized.

The 2015 MAP also included the following related mitigation actions that would benefit wildlife and habitat:

- Planting native forbs to enhance native vegetation, benefit migratory bird communities, and pollinators;
- Collaborating with tribes to identify the appropriate mixture of native plants for revegetation;
- Incorporating findings from any previous monitoring reports performed into mitigation efforts;
- Incorporating findings from the Pollinator Habitat Study performed, including improving habitat enhancement practices, proper management techniques, and collaborating with other agencies to ensure that pollinators and their habitats are protected; and
- Installing burrowing owl boxes at locations determined by USFWS and WDFW.

Additional detail regarding shrub-steppe mitigation is provided in the Critical Areas Report (Attachment F, HDR 2024a).

e. List all noxious weeds and invasive species known to be on or near the site.

According to the Benton County Noxious Weed Control Board (2023), the following noxious weeds are found in Benton County:

- flowering rush (Class A)
- camelthorn *(Class B)*
- common reed *(Class B)*
- Dalmatian toadflax *(Class B)*
- Eurasian watermilfoil *(Class B)*
- hairy wouldow-herb *(Class B)*
- houndstongue *(Class B)*
- indigobush *(Class B)*
- diffuse knapweed *(Class B)*
- Russian knapweed *(Class B)*
- spotted knapweed *(Class B)*
- Bohemian knotweed *(Class B)*
- Japanese knotweed *(Class B)*
- Kochia *(Class B)*
- purple loosestrife *(Class B)*
- perennial pepperweed *(Class B)*
- poison hemlock *(Class B)*
- puncturevine *(Class B)*
- rush skeletonweed *(Class B)*
- saltcedar *(Class B)*
- myrtle spurge *(Class B)*
- musk thistle *(Class B)*
- Scotch thistle *(Class B)*
- Velvetleaf *(Class B)*
- white bryony *(Class B)*
- yellow nutsedge *(Class B)*
- yellow starthistle *(Class B)*
- Ravenna Grass *(Class B)*

- baby's breath *(Class C)*
- buffalobur *(Class C)*
- cereal rye *(Class C)*
- common St. Johns wort *(Class C)*
- field bindweed *(Class C)*
- fragrant water lily *(Class C)*
- hairy whitetop *(Class C)*
- hoary cress *(Class C)*
- jointed goatgrass *(Class C)a*
- longspine sandbur *(Class C)*
- pampas grass *(Class C)*
- reed canarygrass *(Class C)*
- spikeweed *(Class C)*
- bull thistle *(Class C)*
- Canada thistle *(Class C)*
- yellow flag iris *(Class C)*

Based on the 2015 EA report, several wildfires have burned over the area (PNNL 2011) and within the last 5 to 10 years vegetative diversity has been minimal at the site. In addition, most of the lands have been sprayed with herbicide to control weeds and noxious weeds and invasive species were not identified during the field visit in 2023.

5. Animals Find help answering animal questions

a. List any birds and other animals that have been observed on or near the site or are known to be on or near the site.

Examples include:

- **Birds: hawk, heron, eagle, songbirds, other:**
- **Mammals: deer, bear, elk, beaver, other:**
- **Fish: bass, salmon, trout, herring, shellfish, other:**

b. List any threatened and endangered species known to be on or near the site.

A search of the U.S. Fish and Wildlife Service iPaC report, as well as WDFW's PHS on the Web lists the following species potentially within the Study Area (Attachment F, HDR 2024a; USFWS 2023b; WDFW 2023).

Federal Threatened and Endangered Species:

- Gray wolf (Endangered) are highly mobile, and although they have not been documented in the area, it is possible that transient groups could enter the Study Area. Noise from construction could temporarily disturb wolves, resulting in their temporary avoidance of the area. Based on no documented occurrences, lack of suitable habitat in the Study Area, and the transient nature of wolves, the project may affect, but is not likely to adversely affect, gray wolves.
- Yellow-billed cuckoo (Threatened) occurs in open woodland with thick undergrowth, parks, and deciduous riparian woodland. Adequate habitat was not observed in or within 300 feet of the project site, and species presence is not anticipated. Therefore, no impacts to yellow-billed cuckoo are anticipated to occur as a result of the proposed project.
- Monarch butterfly (Candidate) breeding areas are virtually all patches of milkweed in North America. Adequate habitat was not observed in or within 300 feet of the project site, and species presence is not anticipated. Due to the lack of suitable habitat in the project vicinity, as well as a low number of Monarchs within the state, the project may affect, but is unlikely to adversely affect, the monarch butterfly.

State-Designated Priority Species:

- Ferruginous hawk - Ferruginous hawks are protected under the Migratory Bird Treaty Act (MBTA) and are known to nest and forage within the Hanford Site. However, there are no known occurrences within the Study Area and none were observed during field surveys. They were rarely observed during the field survey performed for the 2015 EA. Noise from construction could temporarily disturb ferruginous hawks that reside in the area, resulting in their avoidance of the site.

No critical habitat for the listed species is in the Study Area. None of the species were recently sighted in the area or identified during field surveys, or have particularly suitable habitats within the project boundaries. A full review of sensitive species and their habitats is available in the Critical Areas Study (HDR 2024a). The 2015 EA, which had a larger study area that included the Project Area, did not find any of the candidate, threatened, or endangered species listed. Based on lack of suitable habitat and the absence of documented appearance, noise from construction is the most likely to impact individuals and populations of these species (DOE 2015). However, the distance from construction to known locations of these species, as well as ambient noise levels from surrounding industrial and urban areas, construction is unlikely to adversely affect these listed species.

c. **Is the site part of a migration route? If so, explain.**

The project site is located within the Pacific Flyway migration route that extends from Alaska to Patagonia and is used by waterfowl, eagles, hawks, falcons, songbirds, sandhill cranes, and shorebirds. No critical stopover areas are known to occur within the project site. Migratory routes and stopover areas are not anticipated to be adversely impacted by project activities due to the likely historic industrial disturbances within the project site.

d. Proposed measures to preserve or enhance wildlife, if any.

The degree of habitat use within the project site by wildlife species is limited due to the industrial nature of the surrounding area. The construction and operation of the project are not anticipated to have adverse impacts on protected species due to the poor quality and lack of adequate vegetation available in the study area for use by listed and other wildlife species. No indirect habitat impacts would result from soil erosion and subsequent sedimentation. Potential construction stormwater runoff would be minimized through implementation of BMPs. Terrestrial species could be affected by construction noise. Individuals are unlikely to remain during construction should they happen to pass through the project area due to human activity. The relatively poor quality of the vegetation and the lack of cover further limits use of the area by wildlife species. Noise-related effects within and immediately adjacent to the project site would be limited to occasional transients and are not anticipated to result in nest or burrow abandonment or measurable changes to sensitive life histories or behaviors.

A Mitigation Action Plan (MAP) was written as part of the DOE 2015 EA that was completed for the transfer of a portion of the Hanford Site to the Port of Benton, which included the proposed project parcel (DOE 2015). The 2015 MAP included the following related mitigation actions that would benefit wildlife and habitat:

- Planting native forbs to enhance native vegetation, benefit migratory bird communities, and pollinators;

- Collaborating with tribes to identify the appropriate mixture of native plants for revegetation;
- Incorporating findings from any previous monitoring reports performed into mitigation efforts;
- Incorporating findings from the Pollinator Habitat Study performed, including improving habitat enhancement practices, proper management techniques, and collaborating with other agencies to ensure that pollinators and their habitats are protected; and
- Installing burrowing owl boxes at locations determined by USFWS and WDFW.

e. List any invasive animal species known to be on or near the site.

Based on the DOE 2015 EA, there are no invasive animal species known to be on or near the site. This was inferred through a review of information concerning the distribution of known invasive animal species in Washington.

6. Energy and Natural Resources Find help answering energy and natural resource questions

1. What kinds of energy (electric, natural gas, oil, wood stove, solar) would be used to meet the completed project's energy needs? Describe whether it would be used for heating, manufacturing, etc.

During construction, petroleum products, including gasoline and diesel fuel, would be used to power portable generators, construction vehicles, and other construction equipment. Gasoline and diesel fuel would likely be sourced from local gas stations and the amount required would not affect other users. The amount of transportation-related petroleum products consumed would be similar to medium-sized industrial construction projects.

Zero-carbon (green energy) electricity would be purchased from renewable energy providers and brought to the site via electrical grid managed by Bonneville Power Administration (BPA). The construction of the power grid and associated substation interconnection is part of a separate federal action being completed by BPA.

The 115-kV and 230-kV would step down at a main substation located inside the plant, through new power transformers, to conform to a primary distribution system at 34.5 kV. Process loads, buildings and other loads would be fed from a substation at 34.5 kV, 13.8 kV, 4.16 kV, 480 V and 120 V, as required. Under normal operating conditions, the essential power loads of the project would be supplied from the normal power supply via essential power motor control centers (MCCs) and panelboards. Upon loss of the normal power supply, essential-power MCCs would be supplied from generators driven by diesel engines. The essential supply would be engaged with an automatic transfer scheme.

Electricity would be used for water electrolysers to convert demineralized water into hydrogen and oxygen – the main chemicals used to produce the CAN 27 fertilizer. The 267-MW electrolysers would produce approximately 40,000 metric tons of hydrogen annually, equivalent to approximately 121 metric tons per day. Nitric acid plant compressors (used to generate 95 metric tons per hour of steam) are also powered by electricity.

Telecommunications systems, lighting, heating/cooling in buildings, fire detection, and other aspects of the facility would also require electricity to operate. All of them would be based in a main system

cabinet and some remote ones located in buildings and power-supplied by uninterruptible power supplies (UPSs). Nominal power consumption for each cabinet would be 4,000 VA (at 230 V and 60 Hz). The necessary power would be supplied from the planned electrical substations.

2. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The buildings, process units and other structures would range from a minimum of 15 to an estimated 262 feet for the tallest structure (nitric acid plant stack). The majority would be below 110 feet in height. Shading effects would occur mostly to the project site except for the midday sun, which could project minimal shade onto the area to the north of the project site. The project would not affect the potential use of solar energy by adjacent property to the north, which is proposed for heavy industrial development and not expected to contain solar energy. The parcel to the west is not expected to be affected by shade.

3. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any.

Energy conservation measures would be part of the facility design, including LED lighting at the site, selecting energy efficient equipment, and using electrical motors designed for energy efficiency. Structures would be designed consistent with applicable building and energy code requirements. During construction, anti-idling policies would be implemented to reduce energy consumption in construction equipment. In addition, the facility would comply with the energy efficiency requirements in the Washington State Energy Code (WAC Chapter 51-11c).

7. Environmental Health Find help with answering environmental health questions

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur because of this proposal? If so, describe.

Occupational hazards present during construction of the proposed facility would be those typical of a construction site and include work around heavy, mobile equipment; seasonal weather conditions; exposure to electrical, mechanical, fall, and noise hazards; and hazardous materials. These safety risks to construction workers would be managed and reduced through the implementation of safety and emergency plans. These include enforcing measures in the quality assurance and quality control plan and health and safety plan, along with routine safety inspections, surveillance, and review meetings throughout construction with on-site staff.

Construction activities would involve the use of hazardous materials that could be accidentally released to the environment or result in exposure to workers if not properly managed. These materials are typical of building construction and include small volumes of fuels, paints, adhesives, lubricants, and solvents stored temporarily on-site. Accidental exposure or releases could occur if materials are used in a manner not originally intended by the manufacturer, if wastes are not stored or handled properly, if materials leak from mobile construction equipment, or if fuel was spilled during refueling. The risk of these accidental releases to the environment would be reduced by adherence to site-specific plans and BMPs, including the SPCCP as described in Section B.1.h.

Regarding hazards during operations of the plant, there is a potential for accidental spills and release due to chemical production in the plant. Operational hazards are described in detail in Section B.7.a.3.

1. Describe any known or possible contamination at the site from present or past uses.

A Phase 1 Environmental Site Assessment (ESA) (HDR 2023) and addendum (HDR 2024c) (Attachment J) was conducted for the site which included a review of the DOE Land transfer EA (DOE 2015) for the project area and other surrounding parcels, the Quitclaim Deed and First Amendment of the Quitclaim Deed (Attachment I), as well as a site reconnaissance in July 2023. The Phase 1 ESA and addendum identify recognized environmental conditions (RECs) that may adversely affect the project area and potentially affect the project construction or operations. The following summarizes the findings of the study, and these areas are shown in the Quitclaim Deed (Attachment I):

- No historical operations conducted on site represent a significant environmental concern.
- The Hanford Site's 1100-Area Operable Unit (OU), which formerly included the Project Area, was delisted from the National Priorities List (NPL) following cleanup activities in 1996. The former NPL classification is considered a Historical REC.
- A nitrate plume is in groundwater beneath the Project Area, and beneath most of the 1100-Area OU. Additionally, uranium was detected above the drinking water standard at a monitoring well located directly west of the Project Area. Although trichloroethylene (TCE) has been present within the 1100-Area OU, information available on the Superfund Site page for this OU indicates that TCE concentrations meet drinking water standards.
- Institutional controls, including implementing a deed restriction restricting disturbance to groundwater, have been placed on this OU by the DOE. Therefore, the contaminated groundwater beneath and around the Project Area is considered a Controlled REC (CREC). A CREC is a REC that requires no further remediation, but residual contamination may still exist and the property is subject to some sort of control or use restriction. In this case the use restrictions are identified in the Quitclaim Deed.
- The former Horn Rapids Landfill, adjacent to the Project Area to the east, has land use controls in place. Therefore, the adjacent landfill is considered a CREC.

Based on factors such as distance, hydraulic gradient, topography, type of listing, and listing status of the adjoining and surrounding sites, none of the other surrounding sites identified in the Phase 1 ESA represent a REC.

Based on the findings of the Phase 1 ESA and addendum, with adherence to the Quitclaim Deed and First Amendment to the Quitclaim Deed, the RECs identified above are not anticipated to cause a potential affect to the project during construction or operation. Therefore, a Phase 2 ESA is not recommended.

2. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

In addition to those conditions noted in Section B.7.a.1 and the Phase 1 ESA (HDR 2023) the

following were identified in the project and surrounding area. These are not anticipated to affect the project construction or operation.

- A natural gas pipeline facility is located at the southeastern corner of the site. The facility is clearly marked with chain link fencing.
- Two constrained areas exist adjacent to the project parcel. To the north, there is a 340-acre area that includes a borrow pit (Borrow Pit 6), a U.S. Navy storage and load test site, and waste sites. The other constrained area is a 73-acre area adjacent to the west that was formally the Horn Rapids Landfill. From the 1940s to the 1970s, this landfill was used for the disposal of office and construction wastes, asbestos, sewage sludge, fly ash, and reportedly numerous drums of unspecified organic liquids.
- There is a Quitclaim Deed and First Amendment to the Quitclaim Deed; there is restriction for the site parcel which limits the locations where stormwater drainage facilities are permissible to avoid potential for elevated groundwater levels to mobilize contaminants from groundwater plumes. The proposed project design includes a stormwater retention pond and infiltration area that are located within areas allowed in the deed restriction.
- There is a monitoring well used for nitrate sampling, and sampling from this well has determined the nitrate plume is migrating east towards the Columbia River. Uranium-contaminated groundwater has also been identified under landfill 618-7 located north of the site as well as south of the site at DOE's inactive Horn Rapids Landfill (not to be confused with the Horn Rapids Land stated previously). The presence of uranium at these locations is due to a dispersed plume moving northeast, a commercial nuclear fuel production facility located south of the project site and off the Hanford Site. TCE-contaminated groundwater was found upgradient and downgradient of the inactive DOE Horn Rapids Landfill. The TCE plume has migrated into the 1100-Area OU of the Hanford Site, which is the OU the project site is located in.

3. Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

Construction of the project requires the use of some hazardous materials as described in Section B.7.a.

The project facility would store and produce hazardous chemicals as part of the processes described in previous sections. These include hydrogen gas, ammonia gas, nitric acid, ammonium nitrate solution, ammonium nitrate, and CAN 27 fertilizer. The following table summarizes these chemicals and potential hazards as described in the HAZOP and SIL Determination (Atlas Agro 2023c).

Process Components	Symbol	Chemical Description
Hydrogen (gas)	H_2	Hydrogen is a colorless, odorless, and potentially explosive gas if mixed with sufficient quantities of oxygen (most likely, from air) and sufficiently heated. If accidentally released in a large quantity, hydrogen could displace enough oxygen to cause rapid suffocation. It burns with an invisible flame.

Process Components	Symbol	Chemical Description
Ammonia (gas)	NH_3	Anhydrous ammonia is a flammable liquefied gas (as its vapor may form explosive mixtures with air). Its vapor is lighter (less dense) than air at atmospheric conditions, and it has the same pungent odor as household ammonia. Although ammonia vapor is lighter than air at atmospheric conditions, vapors from an accidental leak are likely to hug the ground, appearing as a white cloud, until they warm to atmospheric temperature. These vapors can displace oxygen and cause rapid suffocation. Ammonia can cause severe skin burns and eye damage and is very toxic to aquatic life.
Nitric Acid (liquid)	HNO_3	Nitric acid is often used in an aqueous solution. Fuming nitric acid is concentrated nitric acid that contains dissolved nitrogen dioxide. Nitric acid is an oxidizer that can corrode certain metals, can cause severe skin burns and eye damage, is toxic if inhaled, and is corrosive to the respiratory tract.
Ammonium Nitrate (liquid)	NH_4NO_3	Ammonium nitrate is a salt of ammonia and nitric acid. Ammonium nitrate is a colorless, crystalline substance. It is highly soluble in water and soluble in alcohol and liquid ammonia. Ammonium nitrate is not in itself combustible, but, as it is an oxidizing agent, it can assist other materials to burn, even if air is excluded.
Calcium Nitrate (solid)	$Ca(NO_3)_2$	As calcium nitrate is an oxidizer, it may intensify a fire. It may cause damage to organs through prolonged or repeated exposure.
Calcium Ammonium Nitrate (solid)	CAN 27	CAN 27 is a granular nitrogen fertilizer based in calcium ammonium nitrate for use on any crop. CAN 27 contains nitrogen as nitrate and ammonium. This material is not considered hazardous by the OSHA hazard communication regulation (29 CFR 1910.1200).

Hydrogen gas has been used for many years as a fuel in the space industry as well as in industrial processes. The other chemicals above are commonly used and produced as part of a fertilizer plant operation. OHSA and industry groups have set standards and guidelines for safely storing and handling the various chemicals processed during fertilizer production. These safety risks to workers and the public would be prevented through the implementation of safety and emergency plans in compliance with the federal, state and industry standards.

4. Describe special emergency services that might be required.

The project is not anticipated to alter the demand for, or require, special emergency services. Safety measures would be coordinated with the City of Richland's emergency response providers (police, EMS, and fire), which may be needed during construction and operations; however, no specialized response is required for an incident at the facility.

On September 28, 2023, Atlas Agro met with Colton Casillas, Deputy Fire Marshall for Richland Fire Department, to discuss safety protocols for the proposed project. Mr. Casillas confirmed that the Richland Fire Department would be the designated authority as first response for fire, medical, and hazardous spills for the proposed project, and that no additional specialized training, equipment, or special emergency services would be required for the project.

5. Proposed measures to reduce or control environmental health hazards, if any.

As described in items B.1.h and B.3.d above, BMPs and other measures would be used to avoid or contain and control accidental spills or releases of hazardous materials during project construction. Project plans and construction specifications include measures to safely handle and dispose of contaminated soil or water in the event contamination is encountered during construction. Construction contractors would be required to comply with applicable provisions of the Occupational Safety and Health Administration (OSHA) and Washington Industrial Safety and Health Act for construction activities. The contractor would also prepare a health and safety plan for the project prior to the start of construction. This plan would comply with applicable health and safety regulations and provide measures to control environmental health and occupational safety hazards. The project would be designed to lessen the potential for spills. An SPCCP would be developed in compliance with state and federal requirements and coordinated with regulatory agencies, local emergency services, and spill response contractors.

Atlas Agro would store and process chemicals subject to OSHA's regulation for process safety management of highly hazardous chemicals (29 CFR 1910.119). Other main safeguards to reduce or mitigate environmental health hazards include the installation of safety instrumentation (e.g., ammonia detectors, alarms), safe routing of expected emission streams, fire suppression systems, and other measures. Safety showers would be installed in various buildings for employee use as required.

Additionally, escape routes and assembly points within the plant would be developed. The equipment and escape routes/plans are developed based on state codes WAC 296-24-567, WAC 296-800-310, WAC 296-842, WAC 296-824 as well as the Washington State Building Code; along with international standards ANSI Z358.1 (2014), NFPA 1989 (2008), and other applicable codes by EPA and OSHA.

Safety practices, during factory operation, would be implemented to meet or exceed industry operating standards. Company personnel and contract employees would undergo safety and process operations training on a routine basis, including training in emergency response and evacuation plans.

The fire water system would be served by water supplied by the City of Richland. A fire detection system and sprinkler system would be required in occupied spaces such as the operations and administration buildings as well as other structures throughout the facility. The site would require a fire water loop with hydrants at code defined locations. A branch from the fire main would feed each building requiring a sprinkler system. Electrical rooms and power distribution centers would also require FM200-style fire suppression systems.

Atlas Agro has conducted several studies to evaluate potential risks associated with the proposed project. These studies have been conducted to comply with federal and state safety codes OSHA 29 CFR 1910.119, WAC 296-67, and EPA 40 CFR 68; and international safety standards OSHA 1910, ISO 17776:2016, API RP 752, IEC 61882, IEC 61508, and IEC 61511. Emergency scenarios such as accidental spills, toxic releases or explosions have been evaluated through the following additional studies prior to operation:

- Fire and Explosion Risk Assessment (FERA) (Atlas Agro 2023a)
- Hazard Identification (HAZID)/Environmental Identification (ENVID) (Atlas Agro 2023b)
- Hazard and Operability (HAZOP) & Safety Integrity Level (SIL) Determination Studies (Atlas Agro 2023c)
- Quantitative Risk Assessment (QRA) (2023) (Atlas Agro 2023d)

The QRA and the FERA findings indicate that the greatest, albeit rare, risk associated with the project is an accidental ammonia leak. The FERA estimated the statistical probability of an ammonium gas dispersion outside of the facility could take place approximately once every 10,000 years. To avoid and minimize this potential risk, the project design includes the following mitigation measures:

- The ammonia storage tank has been designed as a double wall as per the best industry practice. The double wall is designed for full containment in case an ammonia leak occurs inside the tank. The tank also has been surrounded with water cannons as best practice to mitigate ammonia leaks. Additionally, leak detectors are included to activate the facility alarms.
- The project design includes a minimal number of flanges, thereby reducing the potential for leakage to the lowest feasible extent.
- In buildings located near process areas with risk of accidental release, detectors would be provided at the entrances to the air ducts. If an accidental release is detected, a signal will be sent to the fire and gas system and the air intake will be closed.
- All alarm signals can be observed immediately by the operator in the Control Room, differentiating between a fire or a gas leak alarm.
- An ammonia emergency relief flare system would be installed as a safety measure designed to mitigate the risks associated with the accidental release of ammonia gas due to an overpressure scenario in the ammonia, nitric acid, or ammonium nitrate solution plants or the ammonia storage tanks. The emergency flare system would consist of a series of interconnected piping, safety valves, and equipment that are designed to collect and burn the ammonia gas during an overpressure scenario.
- Every process unit is equipped with a manual alarm to be activated by personnel in the event of a possible ammonia leak or fire.
- The electrolysers building roofs would be designed to ensure the relief of potential overpressure of hydrogen through a safe route to avoid damages to humans or other facilities.
- The operator's room of the hydrogen production unit would be in a separate building, and no occupancy is foreseen in the electrolysers buildings.

b. Noise

1. What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

The project site is within a cluster of industrial parcels and open space. Based on a review of aerial photos, the ambient soundscape at the project site includes noise from traffic on Horn Rapids Road, noise from the industrial facilities and their outdoor activities in the area, and occasional freight train

noise. The project team measured existing noise levels on-site for a continuous 24 hours, and the table below summarizes average, maximum, and minimum hourly equivalent (Leq) noise levels (Cecor 2023).

	Daytime (dBA)	Nighttime (dBA)
Average Leq(h)	48.7	48.5
Maximum Leq(h)	57.9	60.1
Minimum Leq(h)	41.3	40.7

Measurement results indicate there is not much variation between average hourly daytime and nighttime noise levels. This suggests that the combination of anthropogenic stationary and mobile noise sources dominate the diurnal soundscape in the study area, which is typical of industrial areas. None of these types of noise are expected to affect the project.

2. What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site?

Noise from daytime construction is exempt from WAC 173-60. The short-term noise associated with the proposed project includes noise from construction equipment and activities. Most of the construction is expected to occur during daytime hours only with minor activities occurring during the night, if needed. There would be a variety of construction equipment and activities used throughout the construction process. This could include dozers, loaders, backhoes, and trucks used during site preparation. Construction activities and equipment would vary in time and location throughout the project site, and once the buildings are erected, construction activities would continue inside those buildings.

Noise levels resulting from operations of the project were modeled and results are documented in the noise study (Cecor 2023). The list of project-related noise sources included in the noise model includes industrial process equipment such as pumps, motors, compressors, conveyors, valves, etc. Other sources of noise include vehicles traveling to/from and within the project site as well as freight trains importing materials to the facility. The unloading and loading of raw materials and products may also produce minor sources of noise. The PGF will operate 24 hours a day with most transportation-related activities occurring during the daytime hours.

The procurement specifications for the project include a maximum allowable sound power level of 85 dBA and noted in the Noise Control Specification for the project (10560-000-HSE-SP-0001). As a conservative approach, all equipment in the noise model was assumed to emit a sound power level of 85 dBA at 3 feet (the “maximum allowable noise level”). As described in the noise study (Cecor 2023) the sound power level of 85 dBA at 3 feet was conservatively used to model noise emissions from all equipment.

Using this conservative modeling approach, analysis results indicate that project-related noise levels are projected to comply with the noise limits in WAC 173-60-050 at all environmental designation for noise abatement (EDNA) property lines in the study area. An EDNA is an area or zone (environment) within which maximum permissible noise levels are established. The figures of the noise study show project-related noise contours corresponding to daytime and nighttime EDNA-specific noise limits.

The EDNA Class A noise contour is a thin blue line visible beyond the footprint of the proposed equipment. EDNA Class B and C contours are thin purple and gold lines that, upon close inspection, are visible in areas closest to the proposed equipment and buildings. These two figures demonstrate that project-related noise levels do not exceed EDNA-specific noise limits where those EDNA land use categories exist off-site.

3. Proposed measures to reduce or control noise impacts, if any.

Noise from daytime (i.e., between 7 a.m. and 10 p.m.) construction activities is exempt from the limits in WAC 173-60-050. Additionally, the following list identifies examples of BMPs that could be implemented to minimize construction noise:

- Direct haul trucks to not park and idle within 100 feet of a residential dwelling.
- Maintain equipment in good working order and use adequate mufflers and engineer enclosures to reduce equipment noise during construction.
- Coordinate construction vehicle traffic routes to minimize the number of passes by residences.
- Implement construction and maintenance work-hour controls so that most noise-generating activities occur between 7 a.m. and 10 p.m., which would reduce the impact during sensitive nighttime hours.
- Minimize the number of heavy-duty haul trucks traveling through the area during nighttime hours.

It is conceivable there may be a piece of equipment that cannot meet the procurement specification (sound power level of 85 dBA). If that occurs, noise control measures would be used as needed to reduce equipment noise to that level (Cecor 2023). The design and installation of acoustic insulation measures would be applied following International recognized standards. The following list identifies examples of potential noise mitigation measures that could be implemented if necessary:

- Selection of low-noise equipment and valves
- Modification of design to reduce noise generation
- Provision of silencers
- Tail pipe lengthening of noisy vents
- Change in plant layout to reduce noise impact
- Enclosure or screening of equipment
- Installation of acoustic insulation
- Provision of quiet work areas

Based on the results of the noise study, the facility units that include noise-generating equipment such as compressors have been designed to minimize noise with additions such as building enclosures and facades, insulation, and wall cladding. Additional detail is described in the noise study (Cecor 2023).

8. Land and Shoreline Use Find help answering land and shoreline use questions

a. What is the current use of the site and adjacent properties? Would the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The project site is currently vacant and is zoned for industrial purposes (Attachment E, Figures 3 and 4). The adjacent area north/northwest of the site is zoned as Unclassified and was formerly the Hanford site, a decommissioned nuclear production complex operated by the United States federal government. East of the site is zoned Business Research Park and is owned by the federal government and used for the Department of Energy's Pacific Northwest National Laboratory (PNNL). South of the site is mostly zoned heavy manufacturing and medium industrial, with one privately owned storage container facility closest to the site.

There is a 100-foot utility/telecommunications easement on the south end of the site adjacent to Horn Rapids Road. There is also a 100-foot BPA easement and a DOE railroad easement to the east of the site adjacent to Stevens Road. These easements are shown on the site plan (Attachment E, Figures 2 and 5).

The project is consistent with the on-site and surrounding land uses and would not affect current or adjacent property land uses.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance would be converted to other uses because of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status would be converted to nonfarm or non-forest use?

Based on a review of aerial photos that date back to the 1980s on Google Earth, and historical photographs in the Phase 1 ESA (HDR 2023), the site has not been used as working farmlands or forest lands. The site was part of the Hanford Site for over 40 years.

1. Would the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?

There are no surrounding working farm or forest lands, hence the proposal would not affect or be affected by those business operations.

c. Describe any structures on the site.

Structures on the site include pole- and pad-mounted transformers, utility boxes, BPA power transmission lines and 100-foot easement, a 100-foot utility/telecommunications easement, monitoring wells, and a DOE railroad track along the eastern perimeter that connects south to the Port of Benton railroad track.

d. Would any structures be demolished? If so, what?

No demolition is anticipated as no structures present on the site would be affected by the project.

e. What is the current zoning classification of the site?

The current zoning classification of the site is M-2 Heavy Manufacturing District (Attachment E, Figure 3). The project is a permitted use in the M-2 Heavy Manufacturing District in accordance with RMC 23.26.030 as activities in the M-2 zone include: general and heavy manufacturing uses; warehousing, storage and distribution; research, development and testing facilities; and office – research and development (RMC 23.26.030). Development standards in RMC 23.26.030 apply to the project and the project is an allowed use in the M-2 zoning designation.

f. What is the current comprehensive plan designation of the site?

The City of Richland comprehensive plan designation for the site is Industrial (I) as shown in Attachment E, Figure 4.

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable as the project site is not adjacent to or in the vicinity of shoreline.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

The City of Richland regulates critical areas and their applicable buffers under RMC Chapter 22.10, Critical Areas. The presence or absence of each type of critical area within the Study Area is described below and in more detail in the Critical Areas Report (HDR 2024a).

- **Wetlands:** Based on a review of online sources and results from the 2013 and 2023 field investigations, there are no wetlands within or immediately adjacent to the Project or Study Area. See Section B.3 for additional details.
- **Fish and Wildlife Habitat Conservation Areas (FWHCAs):** According to WDFW's PHS database the site contains shrub-steppe habitat, biodiversity areas and corridors, and state listed threatened ferruginous hawk. The USFWS IPaC site indicates that the following federally designated species are potentially present within the Study Area: Gray wolf (endangered), Yellow-billed cuckoo (threatened), and Monarch butterfly (candidate) (USFWS 2023b). A discussion of species and habitat presence and potential impacts is described in Sections B.4 and B.5.
- **Geologically hazardous areas:** A geotechnical investigation was conducted in 2023 (GN Northern, Inc.). Due to the site consisting of highly permeable and sandy soils, seismic risk, including liquefaction, is low for the site. The project area is generally located on a flat plateau and natural erosion is primarily from wind erosion. In terms of seismic hazards, there are no confirmed major faults in the Benton County region capable of producing strong earthquakes. Overall, it was found that there are no geologically hazardous areas on the site. A detailed discussion of geologically hazardous areas is in Section B.1.
- **Critical aquifer recharges areas (CARA):** Based on the Washington Department of Health's (DOH) Source Water Assessment Program Mapping (SWAP) application no CARAs or wellhead protection areas are present on or immediately adjacent to the Study Area as described further in Section B.3.
- **Flood hazard areas:** According to the City of Richland Geological Hazards and Critical Areas map and FEMA floodplain mapping (FIRM Community Number 5302370460B) (Attachment F, HDR 2024a), the project area is not within a floodplain as described in Section B.3.

i. Approximately how many people would reside or work in the completed project?

No persons would reside onsite at the completed project site.

The total amount of employees is expected to be approximately 245 including managers, operational and maintenance supervisors and operators, Safety Health Environment Risk & Quality personnel, engineers, and daily administrative staff. The largest shift of employees would work during daytime hours. The shift pattern would be set up together with the employees and following local labor rules and regulations. Typically, there are two types of patterns: 12-hour and 8-hour shifts. Typically, the plant will have five or six shifts to cover the full rotation.

j. Approximately how many people would the completed project displace?

As no existing homes or businesses are present at the project site, the project would not displace people.

k. Proposed measures to avoid or reduce displacement impacts, if any.

The project would not displace people, therefore no mitigation measures are proposed.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any.

The project would be consistent with the standards outlined in Chapter 23.26 (Industrial Zoning Districts) of the RMC and would be compatible with existing and project land uses and plans. The site is zoned heavy manufacturing (M-2). The proposed plant would produce fertilizer, which is an industrial organic chemical. This is permitted in the M-2 zone according to RMC 23.26.030, and fertilizer production meets the definition of heavy manufacturing as referenced in RMC 23.06.615 (G). The project would meet the industrial performance standards and special requirements in industrial zones (RMC 23.26.020). Additional detail is provided in a code review in Attachment B.

m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any.

The project site is not located on agricultural and forest lands, therefore no mitigation measures are proposed.

9. Housing Find help answering housing questions

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

No housing units would be provided on the site.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

No housing units would be eliminated as part of the project.

c. **Proposed measures to reduce or control housing impacts, if any.**

Not applicable as no units would be eliminated as part of the project.

10. Aesthetics Find help answering aesthetics questions

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The tallest building is the Granulation Unit at 220 feet in height. The tallest non-building structure is the nitric acid stack at 262 feet. An emergency flare stack would be constructed and would be approximately 82 feet in height.

There are three types of proposed exterior building materials for the project: (1) fully precast reinforced concrete walls panels and roofs; (2) in situ reinforced concrete/precast frames wall panels and roofs; and (3) steel structures with insulated/non-insulated walls and roof sandwich panels.

b. What views in the immediate vicinity would be altered or obstructed?

Temporary changes to the visual setting near the project during construction would occur from the presence of construction workers, equipment, vehicles, and partially constructed structures. Dust and emissions generated by construction activities could cause visual impacts, although these would be reduced with the use of BMPs, including applying water to limit dust, and minimizing idling time to reduce particulate emissions.

No areas within the viewshed of the project have protected views. The project would be visible from Horn Rapids Road and Stevens Road as well as adjacent properties. The buildings would be set back approximately 750 feet north of Horn Rapids Road and 800 feet west of Stevens Road on the far side of the existing rail tracks. Most of the structures would be less than 100 feet in height and only a few structures would be taller. The dimensions of structures and buildings are described in the Project Description in Attachment C. None of the structures would obstruct any viewsheds in the area. The project is being constructed on a parcel that has long been vacant and would result in a permanent alteration of views from adjacent properties and roads. As the project is in an industrial park and adjacent to industrial facilities, the overall aesthetic in the area would not be affected.

c. Proposed measures to reduce or control aesthetic impacts, if any.

The City does not have height restrictions for industrial zoning. The project would incorporate landscaping as required by City code which would soften the views of the facility. No other mitigation measures are proposed.

11. Light and Glare Find help answering light and glare questions

a. **What type of light or glare would the proposal produce? What time of day would it mainly occur?**

Lighting analysis completed for the project identified exterior lighting for all plant process units,

buildings, and plant battery limits (Attachment C). Aviation lighting would be provided, if necessary, per Federal Aviation Administration (FAA) regulations. Control of the area lighting would be accomplished by photocell as per local normative regulations. Proposed lighting fixtures would include:

- Mast lighting, or similar, throughout the facility for safety
- Streetlights along internal roads, parking lots, and adjacent to buildings, as needed
- Wall packs at personnel entrances on buildings
- Stanchion and ceiling-mounted lights along walkways and stairs

Exterior building lights used for vehicle and worker safety would be in use when operations extend into nighttime hours. Lighting would be used from dusk until dawn, consistent with existing lighting in the area. Lighting intensity would be reduced to the minimum necessary for security purposes. Hence, the project would not introduce substantial new sources of light or glare.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

As stated above, the project would not introduce substantial new sources of light or glare, and therefore, a safety hazard is not expected. The project would incorporate lighting design and associated directional lighting to lessen glare and light spillage to the extent practicable. The lighting at the site would not contribute to a safety hazard to motorists, air traffic, or pedestrians because the project site is within an existing industrial area that is already illuminated. For the same reasons, no safety or view impacts are expected to nearby residents, workers, or tourists.

Artificial lighting can have impacts to wildlife by disrupting the natural patterns of light and dark. Predator and prey activity levels and interactions can be disrupted, particularly in nocturnal species. Migratory birds are attracted to lighted structures at night, and nocturnal predators such as owls can be aided by artificial lighting illuminating their prey.

c. What existing off-site sources of light or glare may affect your proposal?

No known off-site sources of light or glare would affect the project as the project is not sensitive to light or glare from outside sources.

d. Proposed measures to reduce or control light and glare impacts, if any.

In accordance with RMC 23.58.030, exterior lighting would be fully shielded in such a manner that the center of light source would be level or above the edge of the light fixture so that direct light emitted above the horizontal is minimized. All outdoor lighting fixtures, in lieu of shields, would be equipped with refractors which minimize any direct light emitted above the horizontal.

12. Recreation Find help answering recreation questions

a. What designated and informal recreational opportunities are in the immediate vicinity?

No parks or other recreational areas are located within the project site or in its vicinity according to City of Richland Parks and Public Facilities.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No parks or recreational opportunities would be displaced.

c. **Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any.**

There are no parks or recreational opportunities in the Study Area; therefore, no measures to reduce or control impacts on recreation are anticipated.

13. Historic and Cultural Preservation Find help answering historic and cultural preservation questions

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.

A cultural resources evaluation, including site reconnaissance and records review, was completed for the project (HDR 2024b). There is one historic structure within the project site that is recommended eligible for listing in the National Register of Historic Places (NRHP). The Hanford Site Plant Railroad Segment-Kennewick to Hanford (Property ID 731449) is recommended eligible under Criteria for Evaluation A for its significant role in the transportation of goods throughout the Hanford Site during and after the initial construction period (1943 to 1945), and during the Hanford Site's operational period (1945 to 1989). The railroad segment is recommended to be a contributing property to the Hanford Site Historic District. The Hanford Site Plant Railroad Segment-Kennewick to Hanford is part of the larger Hanford Site Plant Railroad network that extends outside the project site. The railroad network was previously recorded and recommended both individually eligible and a contributing property to a potential Hanford Site Historic District (Property ID 13546; HDR 2024b).

As currently designed, the project would use the Hanford Site Plant Railroad Segment-Kennewick to Hanford. A spur line serving the new building would be connected to the Hanford Site Plant Railroad Segment where it enters the parcel at the southeast corner of the Project Area; however, no alterations would occur to this segment that would affect the segment's character-defining features. The frequent addition and removal of spur lines is common practice for railroad properties. No part of the segment would be removed from its current location, and no changes would occur to the character of the segment's use or physical features within the segment's setting that contribute to its historic significance. Accordingly, the project will not impact this resource.

There are no other buildings, structures, or sites located on or near the site that are over 45 years old and listed in, or eligible for listing in, national, state, or local preservation registers.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

As described in the cultural resources study (HDR 2024b), the project site is located within the traditional territory of the Wanapum people, a Sahaptin-speaking Native American group whose territory extended across the Hanford Reach area along the west bank of the Columbia River between southern Richland and Vantage. The project team is not aware of any areas of cultural importance within the project site; however, the Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, and Wanapum Band of Indians have interests in the project vicinity.

Portions of the project site have been previously studied and are detailed in the cultural resources study (HDR 2024b). The HDR study consisted of a pedestrian and subsurface archaeological survey, archaeological monitoring during geotechnical investigations, and historic built environment reconnaissance-level survey within the proposed Area of Potential Effect (APE). The APE is the geographic area within which the project may directly or indirectly affect cultural resources. HDR documented 15 archaeological resources, seven of which were previously recorded historic sites and one previously recorded historic isolate. All but one of these historic archaeological resources were previously determined not eligible for the NRHP by the Washington Department of Archaeology and Historic Preservation (DAHP). One site is a NRHP-eligible historic canal system, a segment of which is within the APE; however, HDR recommends that this segment is non-contributing and individually not eligible. HDR newly identified and documented five historic archaeological sites, all of which are recommended not eligible for the NRHP. HDR also newly identified and documented two precontact archaeological isolates, which are considered unevaluated as they require additional radial shovel probing to complete documentation and evaluation of NRHP-eligibility. The project will avoid these two archaeological isolates until they can be evaluated for NRHP eligibility through radial shovel probing.

The project is being reviewed under Section 106 of the National Historic Preservation Act (NHPA) due to federal funding and permitting requirements. As part of the Section 106 review process, the project team is submitting the HDR cultural resources inventory report to the lead federal agency to support Section 106 consultation (HDR 2024b). The project team anticipates that the lead federal agency will consult with DAHP and affected Indian Tribes regarding their determinations of NRHP eligibility for cultural resources in the project site and assessments of project effects on those resources that are eligible for the NRHP. This consultation is anticipated to be initiated by the lead federal agency in 2024.

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

As described in the cultural resources study (HDR 2024b), the potential impacts to cultural and historic resources on or near the project site were evaluated by reviewing previously prepared reports available in the Washington Information System for Architectural and Archeological Records Data (WISAARD), reviewing the results of prior studies and proposed project construction methods, reviewing historic General Land Ordinance (GLO) and other historic maps of the project site, performing field studies as described above, and consulting with the affected Indian Tribes listed above.

HDR's field study consisted of a pedestrian and subsurface archaeological survey, archaeological monitoring of geotechnical investigations, and a reconnaissance-level historic built-environment survey (HDR 2024b). Representatives from the Confederated Tribes and Bands of the Yakama Nation observed some of HDR's field survey.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

As described above, the project is being reviewed under Section 106 of the NHPA. As part of the Section 106 review process, the project team prepared a cultural resources inventory report that will be submitted to the lead federal agency to support Section 106 consultation (HDR 2024b). As noted above, radial shovel probing will be performed at the two precontact archaeological sites as part of that consultation process to support evaluations of NRHP eligibility.

Additionally, the project team anticipates preparing a Monitoring and Inadvertent Discovery Plan (MIDP) for use during project construction and having an HDR professional archaeologist on-site to monitor select areas during ground disturbing activities. The MIDP will outline the tribal notification and monitoring protocols, and the steps to follow in the event of an inadvertent discovery. If unknown cultural resources are encountered during project activities, work in the immediate area of the discovery would be halted and the following actions taken: 1) implement reasonable measures to protect the discovery site, including appropriate stabilization or covering; 2) take reasonable steps to confirm the confidentiality of the discovery site; and 3) take reasonable steps to restrict access to the site of discovery.

The project will also be conducted in accordance with the RCW 27.53.060 (Archaeological Sites and Resources) and RCW 27.44.020 (Indian Graves and Records) and applicable DAHP guidelines. An Archaeological Site Alteration and Excavation Permit from DAHP is not required at this time given that the project is being reviewed under Section 106 of the NHPA and that the historic archaeological resources are recommended not eligible for the NRHP. An Archaeological Site Alteration and Excavation Permit may be necessary if the two precontact archaeological sites are determined to be eligible for the NRHP and cannot be avoided by the project; however, the lead federal agency will determine the appropriate mitigation and treatment of these resources in consultation with the DAHP and affected Indian Tribes as part of the Section 106 consultation process.

14. Transportation Find help with answering transportation questions

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The main access to the plant for trucks and personnel would be two new access roads from Horn Rapids Road (Attachment E, Figures 2 and 5). Access for trucks and worker vehicles during construction would also be from Horn Rapids Road.

The closest state highways include State Route (SR) 240 (approximately 2 miles south of the project site), SR 224 (approximately 4 miles southwest of the project site), and SR 225 (approximately 8 miles west of the project site). The closest interstate highways includes Interstate 82 (I-82) (approximately 8 miles southwest of the project site) and I-182 (approximately 6 miles south of the project site).

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

Ben Franklin Transit has a bus stop approximately 0.5 miles away in front of the Pacific Northwest National Laboratory (PNNL) Discovery Hall. The transit route that runs near the project site is bus route 26 (Richland WSU/Battelle), and the bus stop is named Innovation Blvd & Horn Rapids Road (46.35103014921841, -119.27560264543345).

c. Would the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle, or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No upgrades to public roads, streets, pedestrian, bicycle, or state transportation facilities are anticipated as part of the project directly. The project does not require any new public highway-rail grade crossings along any of the railroad lines anticipated to be traveled by project related trains.

d. Would the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The closest airport is Richland (Port of Benton) Airport, located approximately 4 miles south of the project site. No air transportation is expected to be used for transport during construction or operation.

The Port of Benton has barge access for companies to transport products via maritime vessels. The Port is located at Columbia River Mile 343. As the project is not located on the Columbia River, it would not utilize marine vessels for transportation during operation. During construction there may be a need to transport pre-assembled process modules and/or large equipment that are shipped via barge in the Columbia River to the Port of Benton. From the Port these components would be moved via truck transport to the project site (approximately 3 miles). No road widening would be required for this transport from the Port of Benton to the project site. Atlas Agro would coordinate with the City of Richland to provide appropriate traffic control (such as temporary lane closures) as needed to accommodate movement of the modules.

There is a railroad easement co-owned by the DOE (north end of the project site) and Port of Benton (southern end of the project site) that parallels Stevens Drive on the eastern side of the project parcel. The existing industrial rail spur that serves the project parcel would be used to import raw materials during operations. This would require construction of an industrial spur from the existing tracks into the PGF. The use of rail is described in detail in the rail study in Attachment K (HDR 2024d).

Construction materials as well as raw materials and finished products for operations would be shipped via truck transport and would utilize the existing road network.

e. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be

trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

Vehicular Traffic

As described in the Traffic Impact Analysis (Attachment L, HDR 2024e), there would be a total of 245 full time employees reporting to work each day. The employees consist of managers, supervisors, operators, admin, and the like. The plant will be operational 24 hours a day, and the work shifts will be split into day shift, swing shift, and graveyard shift, with 8 hours for each shift. The day shift will include 124 employees, while the swing shift and graveyard shift will each include 42 employees.

In addition to the employee trips, regular heavy truck traffic is anticipated to haul materials in and out of the plant. The project is expected to generate 90 truck trips per day during operation, spread over a 10-hour period each day, resulting in approximately nine truck trips per hour.

The Traffic Impact Analysis indicates that the existing intersection of Stevens Drive and Horn Rapids Road and the intersection of SR 240 and Stevens Drive are expected to operate at overall LOS D or better with or without the project. The eastbound/westbound side street approaches at these intersections are currently operating at LOS E and are expected to maintain LOS E with or without project. The northbound/southbound main street approaches for the intersection of Stevens Drive and Horn Rapids Road are currently operating at LOS D or better. The northbound/southbound main street approaches for the intersection of SR 240 and Stevens Drive intersection during the PM peak hour are LOS E currently and with the project.

Rail Traffic

The project requires the import of dolomite and limestone using rail as raw materials for the project. This would result in the equivalent of 1 loaded trains per week of dolomite and limestone and return an equivalent of 1 empty trains per week. This is the equivalent of one project-related train per week between Woodland, Washington, and the project site in the City of Richland (approximately 274-mile distance). As described in the rail study (HDR 2024d), statewide rail line capacity analysis presented in the Washington State Rail Plan, 2019–2040 indicates the rail lines used for project trains are operating at or below capacity. With the addition of the project-related train traffic, the rail lines would accommodate current baseline rail traffic in addition to future project-related rail traffic. No additional rail improvements beyond those proposed at the project site are anticipated to accommodate the additional rail traffic.

f. Would the proposal interfere with, affect, or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

The proposal would result in a minor increase in traffic on local roadways and rail lines when compared to existing traffic. Movement of construction components or vehicles during operations would be coordinated with the local agricultural community to limit impacts to movement of agricultural and forest products from project-related traffic.

g. Proposed measures to reduce or control transportation impacts, if any.

The project does not require mitigation because the project's activity does not worsen the intersection LOS at the intersections analyzed.

As stated in the rail study (HDR 2024d), the existing rail network anticipated to be used for the transport of dolomite and limestone has capacity to handle the additional one train per week proposed by the project. Therefore, no mitigation measures for rail are required.

15. Public Services Find help answering public service questions

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

The project would be in the service area of the Richland Police Department, Benton County Sheriff's Office; Washington State Patrol, Richland Fire & Emergency Services Department (RF&ES), Kadlec Regional Medical Center, Ben Franklin Transit, and Richland School District. As a result of the temporary presence of construction workers, the project could create a short-term increase in the need for emergency services, including police, fire, and medical response during construction.

During operations, there are risks of accidental spills and releases. See Section B.7 for additional detail on avoidance and minimization measures implemented to address these risks.

Construction workers are expected to be from the immediate area or region and are not anticipated to relocate their families to the surrounding vicinities for the short duration of the construction period. Therefore, no demand for additional local school facilities, teachers, or other personnel are anticipated during the construction period. During operations, the addition of 245 permanent employees and their families would represent a minimal impact to local schools and other public services.

b. Proposed measures to reduce or control direct impacts on public services, if any.

The project would be designed to comply with code requirements regarding public safety and emergency response, and Atlas Agro would coordinate with emergency services and responders during project construction and operations. The project would comply with the local building codes and International Fire Code, which would verify demand for public services would not result in adverse impacts; therefore, no measures are proposed currently.

16. Utilities Find help answering utilities questions

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other:

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Zero-carbon (green energy) electricity would be purchased from renewable energy providers and brought to the site via electrical grid managed by BPA. The construction of the power grid and

associated substation interconnection is part of a separate federal action being completed by BPA. The 115-kV and 230-kV lines would step down at a main substation located inside the plant, through power transformers, to conform to a primary distribution system at 34.5 kV. Process loads, buildings and other loads would be fed from a substation at 34.5 kV, 13.8 kV, 4.16 kV, 480 V and 120 V as required. Under normal operating conditions, the essential power loads of the project would be supplied from the normal power supply via essential power MCCs and panelboards. Upon loss of the normal power supply, essential-power MCCs would be supplied from generators driven by diesel engines. The essential supply would be engaged with an automatic transfer scheme.

Natural gas would be supplied from an existing metering station constructed along the eastern side of the Project Area where it would intertie with an existing line.

Telecommunications systems to be included in the project would include: an access control system, a process CCTV system, a video surveillance system, a communication system (including a data network and IP telephony), a paging system (voice evacuation system), a building management system and a radio system. All of these would be based in a main system cabinet and some remote ones located in buildings and power-supplied by UPSs. The existing communications line (currently provided by Spectrum) at Horn Rapids Road would be connected with the project administration building, from there it would be distributed to the rest of the facility.

Raw water would be required in the ancillary buildings, in the process and utility areas where chemicals are managed, and for fire water. Raw water would be obtained from the City of Richland at an interconnection at Horn Rapids Road. Potable water would be required in the buildings for domestic uses (kitchen sinks, toilets, showers), safety eyewashes, and for process use in the hazardous chemical areas. Potable water would be obtained from the City of Richland at an interconnection at Horns Rapids Road.

Sanitary wastewater would be generated from domestic uses, including toilets, kitchens, and showers in the operations and administrative buildings and discharged to the City of Richland sanitary system at an interconnection at Horns Rapids Road. Industrial wastewater would be treated at the on-site wastewater treatment facility and reused within the facility. Some process wastewater would be discharged to the City of Richland sanitary sewer system at an interconnection at Horn Rapids Road.

C. Signature Find help about who should sign

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

X Derek VanArsdale

Type name of signee: Click or tap here to enter text. Derek VanArsdale

Position and agency/organization: Click or tap here to enter text. Project Manager / Atlas Agro

Date submitted: Click or tap to enter a date. 2/5/2024

References

Atlas Agro. 2023a. *Fire and Explosion Risk Assessment (FERA) Report. (Document No. 10560-000-HSE-RP-0001).* Available upon request.

Atlas Agro. 2023b. *Hazard Identification (HAZID) / Environmental Identification (ENVID) Report (Document No. 10560-000-HSE-RP-0002*). Available upon request.

Atlas Agro. 2023c. *Hazard and Operability (HAZOP) & Safety Integrity Level (SIL) Determination Report.* Available upon request.

Atlas Agro. 2023d. *Quantitative Risk Assessment (QRA).* Available upon request.

Benton County Noxious Weed Control Board. 2023. *2022 Weedlist.* Benton County Noxious Weed Control Board (bentonweedboard.com). Accessed January 4, 2024.

Cecor. 2023. *Atlas Agro Pacific Green Fertilizer Plant Predictive Noise Study Report.*

City of Richland (Richland, WA). 2023. *City of Richland Geological Hazards and Critical Areas Map*. Geological Hazards and Critical Areas Map (ci.richland.wa.us). Accessed January 4, 2024.

FEMA. 2023. *Flood Map Service Center – FEMA Floodplain Map.* FEMA Flood Map Service Center (fema.gov). Accessed January 4, 2024.

GN Northern, Inc. 2023. *Geotechnical Site Investigation Report - Atlas Agro Pacific Green Fertilizer Plant NW Corner Of Horn Rapids Road & Stevens Drive Richland, Washington, USA - GNN Project No. 223-1672.*

Hanford Mission Integration Solutions. 2022. *Hanford Site Revegetation Monitoring Report for Fiscal Year 2022.* 345666606.PDF (hanford.gov). Accessed January 23, 2024.

HDR. 2023. *Atlas Agro Pacific Green Fertilizer Plant Phase 1 Environmental Site Assessment*.

HDR. 2024a. *Atlas Agro Pacific Green Fertilizer Plant Critical Areas Report.*

HDR. 2024b. *Atlas Agro Pacific Green Fertilizer Plant Cultural Resources Report.*

HDR. 2024c. *Atlas Agro Pacific Green Fertilizer Plant Phase 1 Environmental Site Assessment Addendum*.

HDR. 2024d. *Atlas Agro Pacific Green Fertilizer Plant Rail Transportation Analysis.*

HDR. 2024e. *Atlas Agro Pacific Green Fertilizer Plant Traffic Impact Analysis.*

NOAA National Marine Fisheries Services (NMFS). 2023. *NMFS Protected Resources App.* Protected Resources App (fisheries.noaa.gov). Accessed January 4, 2024.

PNNL (Pacific Northwest National Laboratory). 2011. GIS layer: AllFires74_10_Copy_ UTM_NAD83_Zone11. Provided to MSA in June 2011. On file with MSA, Richland office.

USDA Natural Resources Conservation Service (NRCS). 2024. *Web Soil Survey (WSS).* Web Soil Survey (usda.gov). Accessed January 18, 2024.

U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetlands Delineation Manual.* Wetlands Delineation Manual (army.mil). Accessed January 4, 2024.

U.S. Army Corps of Engineers (USACE). 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.* Regional Supplements to Corps Delineation Manual (army.mil). Accessed January 4, 2024.

U.S. Department of Energy (DOE). 2015. *Final Environmental Assessment (EA) - Proposed Conveyance of Land at the Hanford Site, Richland, Washington (EA-1915).* EA-1915: Proposed Conveyance of Land at the Hanford Site, Richland, Washington | Department of Energy. Accessed January 22, 2024.

U.S. Fish and Wildlife Service (USFWS). 2023a. *National Wetlands Inventory (NWI)*. National Wetlands Inventory (fws.gov). Accessed January 4, 2024.

U.S. Fish and Wildlife Service (USFWS). 2023b. *Customized IPaC Trust Resource Report.* Generated April 2023. https://ecos.fws.gov/ipac/.

Washington Natural Heritage Program – Washington State Dept. of Natural Resources (WNHP). 2023. *WNHP Rare Plant and Ecosystem Locations Map.* WNHP Rare Plant and Ecosystem Locations Map (dnr.wa.gov). Accessed January 4, 2024.

Washington Department of Fish and Wildlife (WDFW). 2023. *Priority Habitats and Species Database (PHS on the Web).* Priority Habitats and Species List (wdfw.wa.gov). Accessed January 4, 2024.