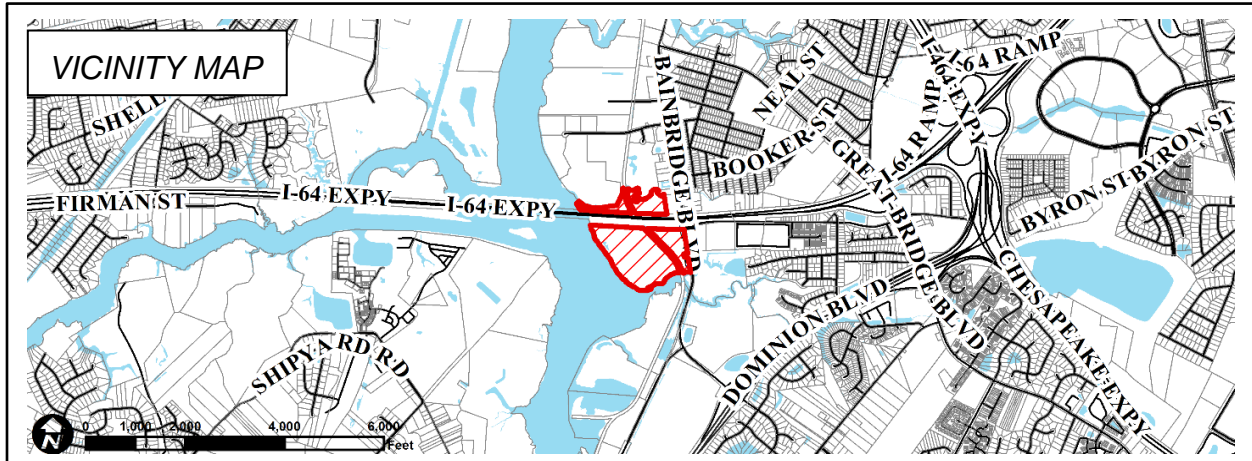


**PLN-USES-2018-001**

*Hampton Roads Integrated BioEnergy Complex #1*



**Project Proposal:** A Conditional Use Permit to operate a Solid Waste Management Facility that will collect and process solid waste and convert a portion of such waste into industrial organic chemicals, mineral wool and biofuels, to include access through an M-1, Light Industrial District to an M-3, Waterfront Industrial District for a use not allowed in the M-1, Light Industrial District and setback reductions.

<b>Tax Map ID:</b> 0350-000-000-701	<b>Existing Zoning:</b> M-3, Waterfront Industrial District and M-1, Light Industrial District
<b>Property Address / Borough:</b> 5100 Bainbridge Boulevard / Washington Borough	<b>Existing 2035 Land Use Plan Designation:</b> Industrial/Logistics
<b>Applicant(s) / Agent(s):</b> Hampton Roads Integrated BioEnergy Complex #1, LLC/ American Engineering Associates-Southeast, PA, Inc.	<b>Public Hearing Date:</b> May 8, 2019 April 10, 2019 <b>Staff Report Date:</b> April 29, 2019
<b>Property Owner(s):</b> A SQUARED 2, LLC	<b>Project Planner:</b> Mark Hobbs, Principal Planner

**STAFF RECOMMENDATION**

APPROVED     APPROVED WITH STIPULATION(S)     CONTINUED     DENIED

**FINDING(S):**

1. The proposed conditional use is consistent with the land use policies of the Chesapeake 2035 Comprehensive Plan.
2. The proposed conditional use is adequately separated from existing residential communities and will not negatively impact area roads; therefore, the proposed use is compatible with adjacent and surrounding properties.
3. The proposed conditional use will be served by adequate fire suppression systems that meet or exceed current Fire Code requirements.

**STAFF RECOMMENDATION:**

Based on the findings contained in this staff report, staff recommends that **PLN-USES-2018-001** be **APPROVED** with the requested setback reductions and with the following stipulations:

1. This conditional use permit shall be limited to the acceptance of specific wastes (the "Waste Stream" as defined below), the extraction and wholesaling of recyclable materials (the "Recyclables") from said Waste Stream, and the conversion of the remaining elements of the Waste Stream into products (the "Products") via processes (the "Processes") listed below:
  - a. Unless expressly noted otherwise, all terms relating to waste, including the term "solid waste" itself, shall be as defined in Section 62-86 of the Chesapeake City Code; except for "municipal solid waste," which shall be considered "solid waste."
  - b. The Waste Stream may include any and all types of solid waste except for the following, which are expressly excluded:
    - i. Hazardous waste, provided that household hazardous waste may be accepted, but shall be processed according to the provisions of Stipulation 17 below; and
    - ii. Nuclear waste; and
    - iii. Radioactive waste; and
    - iv. Hazardous Industrial waste.
  - c. The Processes by which the Waste Stream is separated into Recyclables and converted into the Products shall be as follows:
    - i. Separation of the Waste Stream shall be accomplished by a resource recovery system (the Material Recovery Facility or MRF), which shall be as described in Stipulation 4 below.

- ii. All conversion of the organic portions of the Waste Stream shall be conducted inside fully-enclosed vessels. The conversion of the organic portions of the Waste Stream, which remain after Recyclables are removed, into the Products shall be a series of chemical processes including a gasifier(s), or steam reformer(s), which produce synthesis gases (syngas), itself a Product, a portion or all of which may be further converted to other products by catalyzed chemical reactions inside enclosed vessels. No such conversion shall involve the burning or combustion of the Waste Stream.
  - iii. Conversion of the inorganic portions of the Waste Stream, which remain after Recyclables are removed, into the Products shall be by heating and melting within a fully-enclosed induction furnace, followed by further mechanical processes; including, but not limited to spinning into fiber, solidification and breaking into inert aggregate. No such conversion shall involve the burning or combustion of the Waste Stream.
- d. The Products produced from organic portions of the Waste Stream shall include synthetic natural gas, with further processing of such gas resulting in end products such as diesel fuel, wax, other fuels and hydrocarbons, or similar products as determined by the Zoning Administrator or designee.
  - e. The Products produced from inorganic portions of the Waste Stream and higher moisture organic materials (e.g., food wastes) shall include mineral wool, aggregate (e.g., material similar to crushed stone) and synthetic natural gas for use in an onsite generator (e.g., green electricity).
  - f. Processing to produce the Products may include separation and removal of impurities, which will be marketed as additional Recyclables.
  - g. A small percentage, not to exceed five percent (5%) of the total Waste Stream, including materials coming out of the MRF which are unsuitable for Processing, or byproduct impurities from the Processes, will be disposed of in a lawful manner in a landfill, as provided in Stipulation 3 below.
- 2. The applicant/owner agrees that all solid waste processed at the facility shall be limited to collections generated in the SPSA service area. No out-of-state waste or waste generated outside of the SPSA service area shall be processed at the facility.
  - 3. The applicant/owner agrees that solid waste that is unable to be processed at the facility shall be disposed of at a lawful disposal facility. No solid waste or residual waste shall be disposed of in a landfill located in the Northwest River Watershed or outside of Virginia. The applicant/owner shall prepare a Risk Management Plan and submit it to the Chesapeake Fire Department for review and approval prior to any storage or manufacturing of the product at the facility. As part of this Plan,

the applicant/owner shall develop procedures, which shall be subject to the review and approval of the Chesapeake Fire Department, to appropriately store, contain, mitigate and dispose of any product or portion of material that is determined to be unsatisfactory for the production of biodiesel or is a waste byproduct.

4. The applicant/owner agrees that all collection, sorting and storage of solid waste, residual waste, processed materials or materials to be used in processing solid waste shall occur inside a fully-enclosed building or other fully enclosed structure. Materials extracted or created for sale shall be processed or stored in fully enclosed structures, including conveyor systems between the Material Recovery Facility (MRF) building and silos constructed for storage of materials. There shall be no outside collection, sorting or storage of solid waste, residual waste, processed materials or materials to be used in processing solid waste.
5. The maximum production capacity of biodiesel for the facility shall be no more than thirty thousand (30,000) gallons per day, which equates to approximately four (4) tanker truck loads which shall be trucked out daily under normal operating conditions. On-site storage in compliance with stipulation #4 above shall be permitted, but capacity shall be limited to three (3) 100,000 gallon tanks. On-site bulk storage shall be subject to the fire protection requirements of the Fire Code as determined by the Fire Marshal or designee (see stipulation #25).
6. The applicant/owner agrees to remove any residual waste and/or non-processible waste from the property within 48 hours of its delivery to the site. The applicant/owner shall keep a log of all waste and respective delivery dates which shall be made immediately available to the City upon request to assure compliance with this stipulation.
7. The applicant/owner agrees to adopt, implement and maintain an odor control plan, prior to final site plan approval, which reflects best management practices and which include the following as a minimum:
  - a. An odor management/air filtration system and plan for the Material Recovery Facility (MRF) building, which shall be subject to the review and approval of the Director of Development and Permits or designee, whereby a network of exhaust fans create a pressure inside the building lower than outside, then directs its airflow through an effective filtering system prior to discharge to outside air, and
  - b. A deodorizing system at the MRF building and the truck queuing area similar to that deployed and used at the SPSA landfill in Suffolk for spraying and neutralizing odors through the use of best of class materials to mitigate odors. The odor mitigation systems at the MRF building shall operate when the negative pressure system is inoperable or otherwise not in proper working order and/or upon the receipt of an odor complaint. The odor mitigation system

- at the truck queuing area shall, from Memorial Day to Labor Day, operate whenever trucks are queued in the truck queuing area. Both systems shall be operated whenever complaints are received concerning the emanation or odor from the facility.
- c. A 24-hour complaint hotline whereby within 48 hours of receipt of a complaint regarding odor the applicant provides a response to the complaining party of resolution to the complaint or procedure to be undertaken to respond to any such complaint.
  - d. The odor control systems referenced in a. and b. above shall be installed and operational, and the complaint hotline referenced in c. above shall be implemented, prior to the issuance of a certificate of occupancy for the solid waste management facility.
8. The applicant/owner agrees to adopt, prior to final site plan approval, a litter control plan, which shall consist of daily collection and removal of any onsite and offsite debris. Such litter control plan shall be submitted to the Director of Public Works or designee for review and approval and shall be implemented immediately upon commencement of operations.
  9. The applicant/owner agrees to adopt, prior to final site plan approval, a vector control plan for daily site inspection and removal of vector attractions such as standing water or litter. Such plan shall be submitted to the Chesapeake Health Department for review and approval and shall be implemented immediately upon commencement of operations.
  10. The applicant/owner shall obtain any required license or permit from the Norfolk Portsmouth Belt Line Railroad for the applicant's second crossing of the right of way prior to final site plan approval.
  11. The applicant/owner shall obtain all required local, state and federal permits, including but not limited to, all permits and approvals required by the Chesapeake Bay Preservation Act ordinance and all DEQ Solid Waste, Air and Water Permits, required for operation of the facility prior to issuance of a Certificate of Occupancy for the facility.
  12. The applicant/owner shall limit the number of inbound and outbound vehicle trips during the hours of midnight and 6 a.m. to no more than 9 truck trips. The applicant/owner shall keep a log of all inbound and outbound vehicle trips which shall be immediately made available to the City upon request to assure compliance with this stipulation.
  13. The applicant/owner agrees that the finished floor elevations of all buildings and structures, whether newly constructed or existing buildings on the property subject to this use permit, shall be in compliance with the Floodplain Management Ordinance.

14. The applicant/owner shall construct a left turn lane on Bainbridge Boulevard for northbound traffic entering the property at its northern entrance. The construction and design of said turn lane shall be subject to the review and approval of the Director of Development and Permits or designee, and shall be completed prior to the issuance of a certificate of occupancy for the solid waste management facility.
15. The applicant/owner shall raise the pavement elevation of the portion of Bainbridge Boulevard between the terminus of road improvements constructed with the City's Dominion Boulevard Improvement Project and Booker Street. The raising of Bainbridge Boulevard shall be limited to those sections where the roadway centerline elevation dips below elevation 5.0 on the NAVD 1988 datum and shall include raising such sections up to at least elevation 5.0. The design and construction plans shall be submitted for review and approval by the Director of Development and Permits and the improvements shall be completed prior to issuance of a certificate of occupancy for the solid waste management facility. The applicant/owner further agrees that, in those areas where the pavement elevation is being raised, and where other improvements such as turn lanes (including their tapers and transitions) are being made, it will widen the through lanes of Bainbridge Boulevard to 12 feet, except where prohibited by insufficient right of way, insufficient bridge width, proximity of wetlands or other constraint, as determined by the Director of Development and Permits. The widening of through lanes on Bainbridge Boulevard shall be subject to the review and approval of the Director of Development and Permits and shall be completed prior to the issuance of a certificate of occupancy for the solid waste management facility.
16. The applicant/owner shall dedicate a fifteen (15) foot wide strip of property for public right of way along the property's entire street frontage. The applicant/owner shall reserve an additional ten (10) feet behind the dedicated area for right-of-way, which shall be acquired at no cost to the City. This dedication and reservation, as depicted on the plan entitled, "Turn Lane Exhibit," received April 17, 2019 shall be subject to the review and approval of the Director of Development and Permits or designee, shall be made at no cost to the City, and shall be recorded by deed prior to final site plan approval.
17. Excepting household hazardous waste and incidental hazardous waste that is inadvertently placed in the household waste stream, no hazardous waste shall be brought on site or processed at the solid waste management facility. The applicant/owner shall adopt, prior to final site plan approval, a hazardous waste, household hazardous waste and incidental hazardous waste control plan approved by the Director of Public Works and the Fire Marshal. Such approved plan shall be implemented immediately upon commencement of operations. For purpose of this stipulation, hazardous waste shall include any waste that meets the definition of hazardous waste put forth in Chapter 62 of the Chesapeake City Code and the Fire Code. Household hazardous waste, as defined by Commonwealth of Virginia Administration Code § 9VAC20-60-261, includes surplus or excess household

products that contain corrosive, toxic, ignitable or reactive ingredients, including, but not limited to, cleaning products, old paints and paint-related products, pesticides, pool chemicals, drain cleaners and degreasers and other car-care products.

18. The applicant/owner shall not permit any motor truck of a rated capacity of one and one-half tons or over affiliated with this solid waste management facility to travel on, operate or otherwise use Libertyville Road in the City of Chesapeake. City refuse collection trucks are exempt from this stipulation.
19. The applicant/owner hereby agrees that the City of Chesapeake reserves the right to use this solid waste management facility as a municipal solid waste transfer station and/or final destination for the purpose of direct delivery and deposit of all municipal solid waste collected in the City of Chesapeake. The applicant/owner agrees that such use shall be at no cost to the City, excepting the applicable tipping fee, which shall not exceed the lowest tipping fee charged to any other user or facility for equivalent services.
20. The applicant/owner shall install drains on the tipping floor of the MRF building to enable all leachate from the tipping floor to drain into the sanitary sewer system. Said drains shall be installed and be in compliance with all applicable City and HRSD regulations prior to commencement of operations.
21. This use permit shall expire twenty (20) years from the date the certificate of occupancy is issued for the facility. Prior to the time for expiration of this use permit, the applicant/owner may file a written application to City Council asking for an extension of said use permit without notice or hearing regarding such requested extension being required. Said application must be physically received by the Planning Department not less than two (2) weeks prior to the date of permit expiration. If the Director of Planning determines that the application for extension was received in a timely fashion, the use permit for which such extension is requested shall continue in effect until the application is acted upon by City Council.
22. This conditional use permit shall expire upon a change in ownership of the solid waste management facility and materials recovery facility approved under PLN-USES-2018-001.
23. In the event solid waste management operations cease at this facility, the applicant/owner shall be solely responsible for removal of all solid waste from the property and the lawful disposal of same. Such waste removal shall be completed no later than thirty (30) days after operations cease, as determined by the Director of Development & Permits.
24. Prior to the issuance of a certificate of occupancy, the applicant/owner shall provide the City Manager with a certificate of environmental protection insurance in the amount of five million dollars (\$5,000,000.00) naming the City as an insured party for any and all costs, losses, damages or fines incurred by the City due to

environmental clean-up or other remedial action arising out of the closure, abandonment or failure of the solid waste management facility permitted under this conditional use permit. The required insurance shall be maintained by the applicant/owner for so long as the solid waste management facility continues to operate and throughout all closure activities.

25. In addition to fire protection systems required by the Fire Code, the applicant/owner acknowledges and agrees that the following fire protection systems and/or features may also be required at the discretion of the Fire Marshal prior to the approval of final site plan and/or systems review for functional and efficient fire protection to enhance overall fire and life safety protection. All requirements listed below shall be completed and/or met in the time frame required by the Fire Marshal and shall be subject to the review and approval of the Fire Marshal:
  - a. Installation of a water main and/or the use of an existing water main sized to meet on-site fire flow demand is provided to supply water for automatic fire protection equipment including building sprinkler systems as well as foam application for hazardous materials systems, and fire hydrants used for manual firefighting operations. Such water main must meet the largest fire demand scenario identified through hydraulic and foam (concentrate and finished foam) demand calculations, including a current flow of the city main supply that must collectively be provided for final site plan approval. The applicant shall ensure that all water required for minimum automatic suppression & manual firefighting demands shall be supplied from a municipal water source only.
  - b. If foam protection systems are required by the Fire Department, in addition to the foam concentrate necessary to provide finished foam required to protect storage tanks, equipment and exposures as determined in accordance with NFPA 11 – Standard for Low, Medium & High Expansion Foam, the applicant shall provide and maintain extra (redundant) foam supplies in amounts equivalent to not less than 2 times that required by the largest, calculated demand scenario; in type, containers, distribution equipment and methods in accordance with the requirements of the Chesapeake Fire Chief/Emergency Services Coordinator or designee.
  - c. The design, installation and operation of any water lines, pumps, tanks, hydrants and related equipment or improvements needed to meet and maintain the required water supply demand and water pressures at all times for overall site protection, as determined necessary by the Fire Marshal.
  - d. The installation and maintenance of water main fire suppression system pumps necessary to meet water demand pressure, which shall require electric



- generator back-up for electric fire pumps and water storage tanks to meet volume demand as required by the Fire Marshal, that will simultaneously provide adequate water supply to the fire suppression nozzles, fire hydrants, fire sprinkler systems and other firefighting equipment. The applicant/owner shall be responsible for ensuring that the firefighting water supply meets all current demands and be upgraded when necessary, as determined by the Fire Marshal, to meet future demands.
- e. Appurtenances such as fire department connections, post indicator valves (PIV), which are required for building sprinkler systems, which must both be monitored by the fire alarm system and private fire hydrants, shall be installed in accordance with the Virginia Statewide Fire Prevention Code and National Fire Protection Standard 24, and shall be located remotely off any structure by a minimum of forty (40) feet.
  - f. Fire Department connections shall be configured to ensure that Fire Department apparatus can augment the fire suppression equipment without pressurizing the hydrant system. Fire department connections shall have a fire hydrant supply within fifty (50) feet and shall be independently piped to supply both sprinkler and foam suppression systems separately, but may be located side-by-side with proper access clearance and be properly labeled to differentiate use to emergency personnel. Similar signage is required to identify all fire protection equipment locations, valves or other pertinent information necessary to facilitate emergency operations.
  - g. Fire detection, fire alarm annunciation, fire suppression, remote sensor monitoring and controls shall be required. The fire alarm and suppression shall be in a location approved by the Fire Marshal.
  - h. If fire pumps are required to be installed based on calculations made during final site plan, then remote operation and back-up power will be installed. Existing pumps may be used to satisfy this requirement if approved by the Fire Chief or designee.
  - i. Remote shut off of fuel loading equipment at all loading racks shall be provided.
  - j. Remote shut-off of flammable, combustible or corrosive material transfer or processing equipment shall be provided.
  - k. The applicant/owner shall submit a Pre-incident Plan, that will be subject to the review and approval of the Fire Marshal, and will include the following: current facility layout including storage tanks, facility piping, loading racks,

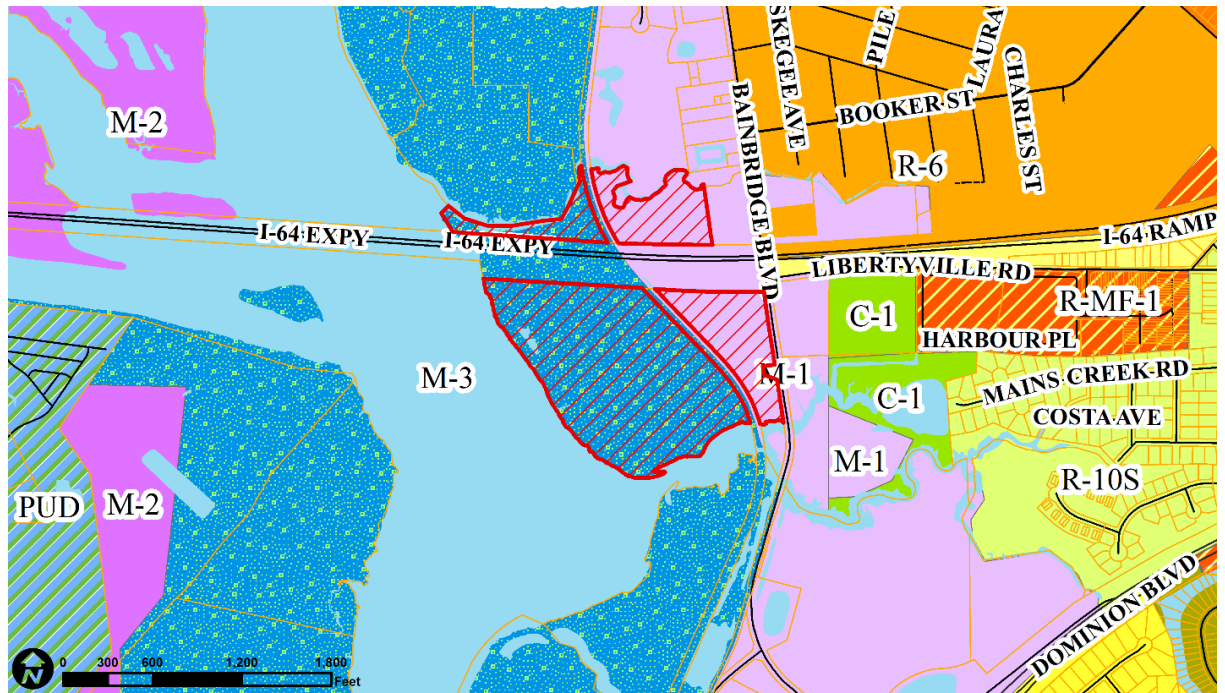
emergency access points, current facility emergency response plan and current emergency contact list.

- I. The facility shall be manned and monitored twenty-four hours a day, seven days a week by a designated plan operations liaison employee knowledgeable in plant operations, equipment, safety equipment and safety procedures. The applicant/owner shall provide the Fire Marshal with a list of all individuals who shall act as a designated plan operations liaison employee prior to commencing the use. In the event of an emergency or other incident requiring an emergency response, the designated plan operations liaison employee will coordinate with the Fire Marshal and be present onsite to assist the Fire Department Incident Commander in any way determined necessary by the Incident Commander.
26. The applicant/owner shall submit a Security Plan for the facility which shall be subject to the joint approval of the Chesapeake Fire Chief/Emergency Management Coordinator and the Chesapeake Chief of Police, or their respective designees. Such plan shall be subject to a periodic review and update, as determined by the Fire Chief/Emergency Management Coordinator or Chief of Police. Said Security Plan shall comply with the following parameters:
- a. The applicant must provide and maintain all equipment related to security and monitoring of the facility, including without limitation 24-hour cameras. Access to this equipment and any recordings shall be provided to the Chesapeake Fire Department, Emergency Management Coordinator and/or Chesapeake Police Chief within fifteen (15) minutes of any request during normal business hours. If a request is made when the facility is closed, access to the recordings shall be made available within one (1) hour of a request from the Chesapeake Fire Chief, Emergency Management Coordinator and/or Chesapeake Police Chief.
  - b. The applicant shall ensure that security personnel will be deployed to and remain at the site in the event of security and terrorist threats determined by order of the Chesapeake Fire Chief or Emergency Services Coordinator upon consultation with, and advice of, the Chesapeake Police Chief, in the case of a known threat against the industry; a specific threat against the facility and affiliated companies; or a specific threat to adjacent industries.
  - c. Lighting of the facility shall be at a level sufficient to promote security, and shall be inward-directed to minimize spillage of light to adjacent residential areas.

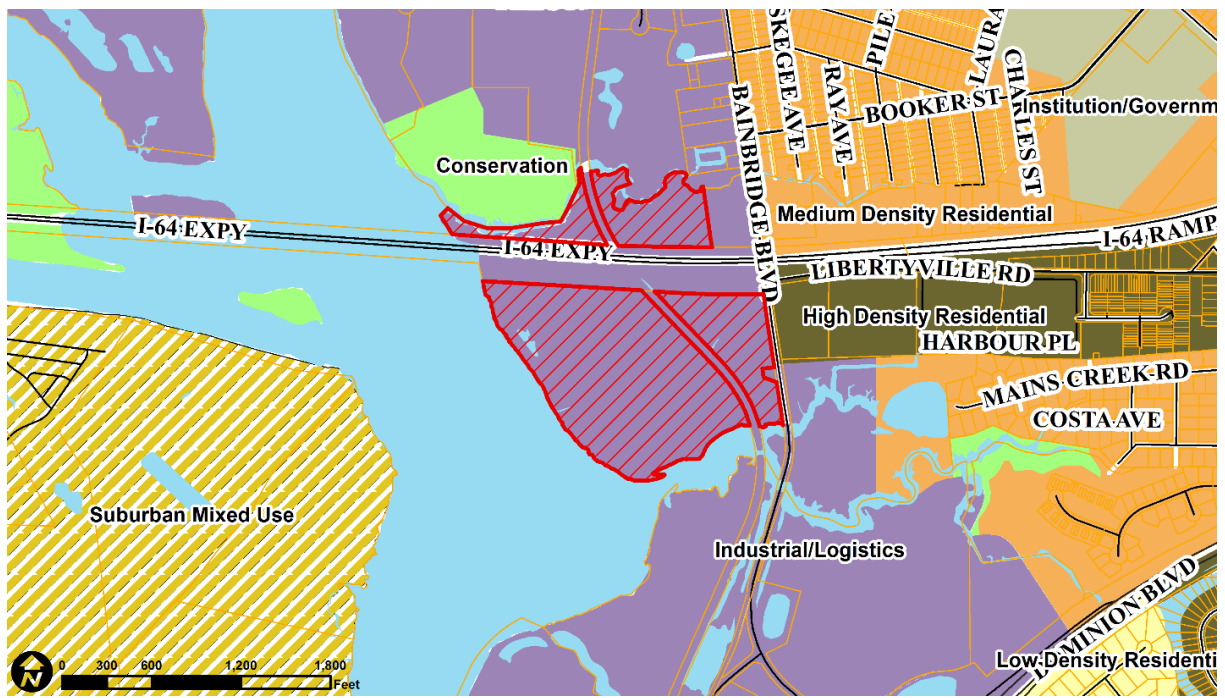
27. The applicant/owner agrees to apply for participation in the OSHA Star Voluntary Protection Program within two (2) years of commencing plant operations.
28. To protect the public's health, safety and welfare, the applicant/owner shall, upon request from the City of Chesapeake Fire Department, Chesapeake Local Emergency Planning Committee (LEPC), or the Hampton Roads Regional Hazardous Materials Response Team, conduct a training program to inform first responders how to respond to an incident at the site. This training should include all aspects of the operations conducted on the property subject to this use permit, as they relate to safety and emergencies, including but not limited to, manufacturing operations, fixed tanks and piping, and transportation (rail, truck, ship, etc.) emergencies. Training opportunities must include any private contractor(s) or company employees that the applicant/owner employs for emergency response.
29. If required by any other State or Federal Occupational Safety Regulation, the applicant/owner shall ensure that any Self-Contained Breathing Apparatus at the facility shall be of the same brand, model and type used, or approved by, the Chesapeake Fire Department.
30. If required by the Federal Homeland Security regulations, video capability to view all areas of the processing, storage, loading and other areas identified by the Fire Department will be provided. The applicant/owner shall notify the Fire Department within sixty (60) days of verifying that Federal Homeland Security regulations require them to provide video capability.
31. The applicant/owner shall perpetually maintain a copy of all facility inspection reports in a secure location and shall make them available to the City of Chesapeake within one (1) hour of request from the City Manager, City Attorney, Fire Chief/Emergency Management Coordinator, or their respective designees. The inspection reports shall include the date, purpose, scope and findings of all inspections of the facility, whether conducted by an individual, private entity, insurance company, OSHA, the U.S. Coast Guard, or any other federal, state, local or private agency, association or organization.
32. The applicant/owner shall, upon request, provide a representative to attend a meeting(s) of the City of Chesapeake Local Emergency Planning Committee (LEPC) to discuss the operation of this facility.
33. The applicant/owner shall provide the Chesapeake Fire Department with a list of new safety, handling, dispensing and storage equipment, technologies and features for alternate fuel manufacturing facilities, including a comparative analysis of the existing equipment and process at the facility. Such list and analysis shall be provided at least once every ten (10) years or more frequently, if requested by the Fire Department.

34. The applicant/owner shall establish a list of representatives within any subdivision, any part of which is within one-quarter mile of the facility and make contact at intervals not longer than annually with each such representative to: (1) confirm that the contact information is still current; and (2) determine if there are any issues concerning the operation of the facility that need to be addressed by the Plant Operator. The applicant/owner shall provide a report detailing the results of the annual survey which shall be delivered to the Fire Marshal within thirty (30) days of the conclusion of the annual survey.

EXISTING ZONING MAP



2035 LAND USE MAP



## **PROJECT DESCRIPTION:**

The applicant seeks approval of a Conditional Use Permit to operate a Solid Waste Management Facility that will collect and process solid waste and convert a portion of such waste into industrial organic chemicals, mineral wool and biofuels. In addition, a request to access through an M-1, Light Industrial District to an M-3, Waterfront Industrial District for a use not allowed in the M-1, Light Industrial District and setback reductions are sought.

The Material Recovery Facility receives solid waste which is deposited on a tipping floor and mechanically sorted through a mixed waste processing system that segregates the waste stream. High value recyclables are baled and sold. Remaining materials are transported by conveyors to the BioRefinery where all organic materials are converted to synthetic gas (syngas) by using a steam reforming gasification process. Organic materials that can be used include a broad range of manufactured items or green feed stock such as yard debris. Inorganic materials such as glass, brick, and block are diverted to a separate Insulation Production Facility where the materials are melted and processed into mineral wool which is used for insulation. Putrescibles, organic materials with a high moisture content, are also sent to this facility and are processed into syngas that is used to power the facility. The above combination of sorting and processing is expected to produce a residual waste stream of approximately 3%, which will be taken off site and deposited at an authorized landfill. Additional information, titled Chesapeake Integrated BioEnergy Complex #1, dated March, 2019, is provided by the applicant and attached to the report.

## **BACKGROUND:**

Hampton Roads Integrated BioEnergy Complex #1 (UP-15-09) was previously approved by City Council on January 16, 2016. The conditional use was not initiated on the property and this approval has subsequently expired. The previous and current applications are similar in that both receive solid waste on a tipping floor where the waste is sorted and processed and high value recyclables are baled and sold. In this respect, the two applications are identical and many of the stipulations from the first application have been carried over to the current application. An important difference between the applications is how the waste is treated after the recyclables have been removed. The previous application used a mechanical process to produce fuel pellets for combustion in coal fire electric plants. The current application uses a chemical process to produce syngas that can be further refined. The applicant plans to use the syngas to produce clean diesel and industrial waxes. Mineral wool will be produced from inorganic materials that can not be converted to syngas. The current application is more efficient and will send significantly less residual waste to a landfill.

At the time that the previous application was submitted, the applicant was one of several organizations to submit proposals to the SouthEastern Public Service Authority (SPSA) to process municipal solid waste (MSW) generated by the member localities. The member localities, including the City of Chesapeake, are currently obligated to provide MSW to

SPSA through June 30, 2027. If the current application is approved, the applicant will need to acquire sufficient solid waste, outside of the contractually obligated SPSA waste stream, to serve as feed stock for the manufacturing facility. It should be noted that approximately 50% of the area's solid waste is generated outside of this waste stream, typically handled by private haulers that service industrial, commercial and residential multi-family properties.

**COMMENTS:**

AGENCIES NOTIFIED	RESPONSE REC'D DATE	AGENCIES NOTIFIED	RESPONSE REC'D DATE
City Attorney	No Objections	Economic Dev.	No Comments
D & P / Dev Eng	April 29, 2019	Fire Prevention	March 19, 2019
D & P / Zoning	No Objections	Police	No Objections
CBPA	March 5, 2019	Elizabeth River Proj.	March 18, 2019
D & P / Code Enforce	No Objections	DEQ	No Comments
Public Utilities	November 13, 2018	TCC	March 13, 2019

*Received comments are attached.*

**STAFF ANALYSIS:**

The Land Use Plan, an element of the Chesapeake 2035 Comprehensive Plan, designates the subject property for Industrial/Logistics land uses. The proposed solid waste management facility is consistent with this designation. The subject property is in close proximity to Dominion Boulevard, which will provide excellent access to the regional road network. Also, the site has direct access to rail and the Elizabeth River which makes it a valued industrial property well suited for the proposed conditional use.

A stipulation has been provided that grants the City an absolute right to deposit its municipal solid waste at the facility subject to this use permit at a tipping fee that does not exceed the lowest fee charged to any other user of the facility, regardless of whether the City has a contractual relationship with the regional solid waste management authority. The applicant agreed to this stipulation and it addresses land use issues. First, the stipulation protects the public's health, safety, convenience and welfare by ensuring adequate solid waste management facilities exist and that public funds for such systems are expended in an efficient and economically responsible manner. Further, the proposed stipulation guarantees that Chesapeake may utilize an important infrastructure facility located within its boundaries and ensures public benefit from the granting of this use permit roughly proportional to the degree of impact. Finally, this stipulation is consistent with the goals and objectives of the 2035 Comprehensive Plan. The Comprehensive Plan states that the City shall maintain environmentally sound and efficient solid waste management systems and continue to study long-term solutions to service, capacity and cost (page 122). In addition, the Comprehensive Plan states the City's goal of reducing costs and providing collection systems and transfer stations within our City (page

123). For these reasons, the proposed stipulation protects the public's health, safety and welfare and is consistent with the goals and objectives of the Chesapeake 2035 Comprehensive Plan.

Section 62-92(2) of the City Code allows for the setbacks required for solid waste management facilities to be reduced by City Council with the following finding, "...that the reduction will not adversely affect neighboring properties, degrade water quality or otherwise endanger the public health, safety and welfare." The applicant has made a request, dated April 17, 2019 and attached at the end of this report, to reduce the following setbacks.

200 feet to 90 feet from Interstate 64 and 200 feet to 168 feet from Bainbridge Boulevard: The applicant has dedicated the necessary right-of-way for the widening of I-64, leaving a 90 foot setback as measured from the new right-of-way line to the Material Recovery Facility. Given the elevation of the interstate, the proposed facility will not impact or interfere with traffic using the interstate. Also, a small building for the storage and crumbing of tires will be located at the front of the property within 168 feet of Bainbridge Boulevard. Given the size of the building combined with the requirement that all operations and storage must occur indoors, the impact of the reduction request is minimal. Staff does not offer any objections to the requested setback reductions from the public right-of-ways.

1,500 feet to 1,432 feet, from an existing residence to the Material Recovery Facility and 918 feet to the tire crumbing facility: The property located at 5021 Bainbridge Boulevard, on the north side of Interstate 64, is the only residence that does not meet the 1,500 foot setback by 68 feet as measured to the closest point of the Material Recovery Facility. This residence is completely screened from the solid waste management facility by the increased elevation of the interstate. The tire crumbing facility as discussed above has a minimal impact on the property, but would also be screened from the residence by the interstate. For these reasons, staff does not offer any objections to the requested setback reductions from the existing residence.

1,000 feet to 183 feet from a waterbody (Elizabeth River): The subject property is located in a Chesapeake Bay Preservation Area (CBPA). This portion of the CBPA does not require a 100' RPA buffer because it has been designated as an Intensely Developed Area (IDA), as allowed by the ordinance. The applicant has obtained project approval from the CBPA Review Committee with stipulations that require restoration of buffer areas not within the development footprint. The applicant has agreed to work with the Elizabeth River Project and City Staff on a re-vegetation plan best suited for this environment. The subject property also lies within the 100 year flood plain and will be required to elevate the finished floor of all proposed buildings 1.5' above the base flood elevation for a total elevation of 10.5' NAVD Datum 1988. Compliance with the Floodplain Management Ordinance, combined with a stipulation requiring all operations and storage to be conducted in fully enclosed buildings, will adequately protect against possible water quality degradation during an extreme tidal event. Effective stormwater management, as required by existing ordinances, will provide additional protection of water quality. The



site plan indicates the preliminary locations of two stormwater management ponds. Staff does not offer any objections to the requested setback reduction.

The proposed conditional use will be highly visible from I-64. In order to ensure that the site is not an eyesore to travelers on the interstate or to surrounding properties, the applicant has agreed to submit a Litter Control Plan for approval by the Director of Public Works. Although all operations and storage will be indoors, loose debris may occur when bay doors to the tipping floor are open or from trucks entering or leaving the facility. The plan will include the daily collection and removal of any on-site or off-site debris. This will help to ensure that the subject property and Bainbridge Boulevard will not become unsightly or contribute to water quality degradation.

The proposed solid waste management facility will be located in an industrial area with significant spatial separation from existing residential communities. Stipulations are provided that require adoption and implementation of an odor control plan that will help to ensure that any odors generated by the facility will have no impact on surrounding properties. The plan will include an air management and filtering system, a deodorizing system for the plant and the truck queuing area and a 24 hour complaint hot line. The odor control plan will be submitted for review and approval by the Director of Development and Permits prior to approval of the final site plan. The proposed BioRefinery will utilize chemical processes within a closed system without any venting or discharge outside of the building. The induction furnace used to manufacture the insulation will also utilize a closed furnace system without any outside discharge. For these reasons, the BioRefinery is not an odor concern. The level of noise created by operations at the Material Recovery Facility and the BioRefinery will not exceed levels commonly associated with other industrial uses allowed by right in this area. For the above reasons, the proposed conditional use will be compatible with the surrounding community and will have no more adverse effects than would any other use generally permitted in the same industrial districts.

The applicant has offered and the City accepted stipulations that will result in improvements to Bainbridge Boulevard. The applicant has agreed to raise the elevation of Bainbridge Boulevard between Booker Street and Dominion Boulevard to a minimum of 5.0 on the NAVD Datum 1988, in those areas where it is less than 5.0. The applicant will also construct left and right turn lanes into the subject property. In these areas on Bainbridge where work will be required, the applicant has also agreed to widen Bainbridge Boulevard to a minimum of 12 feet for each travel lane, unless constrained by insufficient right-of-way, bridge width, wetlands or other restrictions. The proposed conditional use will generate traffic similar to other by-right uses allowed in industrial zoning districts and can be accommodated by existing and improved roadways. The Department of Development and Permits does not have any objections to the proposed conditional use.

The BioRefinery will be limited to the production of no more than 30,000 gallons of diesel fuel per day and limited to a storage capacity of no more than three (3) 100,000 gallon tanks as detailed in stipulation #5. The applicant has worked with the Fire Department to address fire safety concerns resulting from diesel production and other aspects of facility operations. The result has been stipulations #25 through #34 which clarify fire

suppression requirements and expectations for the facility and in some cases exceed Fire Code requirements when deemed necessary. The stipulations address a range of topics some of which include: maintaining adequate water and foam supplies on site, providing water pump systems with backup power sources, the locations and configurations of fire connections, detection and sensor systems, remote shut off controls for certain equipment, maintaining a pre-incident plan and agreeing to joint training exercises with the Fire Department. The applicant will also be required to submit a Security Plan subject to the joint approval of the Chesapeake Fire Chief/Emergency Management Coordinator and the Chesapeake Chief of Police, or their respective designees.

The subject property falls within two different zoning districts with M-1, Light Industrial across the frontage with Bainbridge Boulevard and M-3, Waterfront Industrial to the rear. Solid waste management facilities and chemical manufacturing are allowed as conditional uses in both districts. The manufacturing of mineral wool is a permitted use in the M-3, district, but not allowed in the M-1, district. A Conditional Use Permit is required for access to a use that is not allowed in the district that provides the access. In this case, given the intensity of uses that will be located on the property, the impact of mineral wool manufacturing is not significant and will be comparable with the other uses. Staff has no objections to the requested conditional use for access through the M-1, district.

MH:bh

cc: Jimmy McNamara, Current Planning Administrator

### **ATTACHMENTS:**

1. Comments Received:
  - i. D & P / Dev Eng, dated April 29, 2019
  - ii. CBPA Approval, dated March 5, 2019
  - iii. Public Utilities, dated November 13, 2018
  - iv. Fire Department, dated March 19, 2019
  - v. Elizabeth River Project, dated March 18, 2019, with applicant's response dated April 5, 2019
  - vi. Tidewater Community College, dated March 13, 2019
2. Site Plan, dated April 17, 2019, with Process Flow Plan dated April 23, 2019
3. Request for setback reductions, dated April 17, 2019
4. Chesapeake Integrated BioEnergy Complex, dated March, 2019
5. 2016 Aerial Map