STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL
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DOVER, DELAWARE 19901

Office of the
Secretary

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Secretary's Order No. 2007-W-0001

Re: Application of Alma, L.L.C. for a Water Quality Certification and Subaqueous Lands Permit to Construct a Solid Waste Transfer Station at 601 Christiana Avenue, Wilmington,

and

Application of Alma, L.L.C. and Delaware C & D Recycling, L.L.C. for a Solid Waste Permit to Construct and Operate a Solid Waste Transfer Station for Construction and Demolition Solid Waste at 601 Christiana Avenue, Wilmington

Date of Issuance: January 16, 2007
Effective Date: January 16, 2007

Under the authority granted the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC") under *7 Del. C.§6003*, the following findings, reasons and conclusions are entered as an Order of the Secretary. This Order considers two applications that relate to the proposed construction and operation of a solid waste transfer station at 601 Christina Avenue in the City of Wilmington. On March 22, 2006, Alma, L.L.C.'s ("Alma") applied for a subaqueous lands permit and water quality certification, which sought permission to dredge in the Christina River and construct loading and docking structures for barge transportation of construction and demolition waste from the proposed transfer station. On March 30, 2006, Alma and Delaware C & D Recycling, L.L.C., applied for a solid waste permit to construct and operate the proposed solid waste transfer station.

On August 30, 2006, the Department held a consolidated public hearing on the applications. The Department's Senior Hearing Officer, Robert P. Haynes, developed a record of decision, and prepared a report of recommendations ("Report"), dated December 19, 2006, a copy of which is appended to this Order and incorporated herein. The Report finds that the subaqueous application meets the Department's regulatory standards, and recommends the approval of the subaqueous application and the issuance of a subaqueous permit and water quality certification, subject to the reasonable conditions recommended by the Department's technical experts within the Department's Division of Water Resources ("DWR"), Wetlands and Subaqueous Lands Section ("WSLS"). The Report also finds that the solid waste application meets the Department's regulatory standards and recommends approval of the solid waste application and that the Division of Air and Waste Management, Solid and Hazardous Waste Management Branch ("SHWMB") issue a solid waste permit to construct and operate a solid waste transfer station for construction and demolition solid waste, subject to reasonable terms and conditions appropriate to protect the environment and public health.

The Report considers the public comments, which opposed the issuance of a permit. The comments raised questions on the potential risks to the environmental and public health from constructing and operating the proposed solid waste transfer station. The Report finds that the record provides the necessary support for issuing the permits, subject to the Department's ongoing regulation and the reasonable permit conditions. The Report determines that the Department carefully has reviewed the applications and considered the public comments, and concludes that approval of the proposed transfer station is consistent with the Department's statutory authority and the Department's regulations. I adopt the Hearing Officer's review of the record and recommendations.

My review of the Report and the record finds and concludes that the Department should issue a subaqueous permit consistent with the draft permit, which will allow Alma to conduct the regulated activities in subaqueous lands. I also approve the issuance of the solid waste permit to construct and operate the solid waste transfer station. The Department will include conditions to its permits that are reasonable and appropriate to protect the environment and public health from the risk of harm.

The proposed transfer station will be unique in Delaware in its proposed use of barges to transport construction and demolition solid waste to locations where it will be disposed or reused. The use of barges, as opposed to tractor trailer trucks, will significantly reduce the number of trucks needed for the transfer operations. For example, one loaded barge equals approximately 350 trucks. Thus, the use of barge will means less traffic congestion on Delaware roads and fewer emissions of air pollutants from the trucks' exhaust.

Moreover, the applicants' business plan contemplates that portions of the construction and demolition waste will be recycled for beneficial reuse. The Department's policies encourage the use of recycling and these permits are issued consistent with these policies. Another environmental benefit from the proposed solid waste station is that it will be built on an existing industrial site. The site was the subject of the Department's enforcement action and remediation, and its proposed use as a transfer station is consistent with the approved environmental remediation. Consequently, the proposed transfer station will allow the beneficial reuse of the industrial site, which is consistent with the Department's policies to reuse existing industrial sites. The location of the proposed solid waste transfer station is adjacent to the Port of Wilmington. This industrial area already has considerable truck traffic at all

hours and days. The Department considers that the site is an appropriate location for the proposed solid waste transfer station, and that there is a regional need for the transfer station to consolidate and remove construction and demolition waste.

The issuance of the permit will include certain reasonable conditions that the Department imposes to protect the environment and public health from the potential risk of harm. These conditions include provisions that will protect the water quality of the Christina River during the construction of the transfer station's docking facilities and its operation. The Department's conditions in the solid waste permit also will require careful operation of the proposed transfer station, and the Department will continue to monitor the proposed transfer station's operations to ensure compliance with the permits.

In sum, as more fully described in the reasons and findings above and in the Report, I adopt and direct the following as a final order of the Department:

1. The Department has jurisdiction under its statutory authority to make a determination in this proceeding;

2. The Department provided adequate public notice of the permit applications and the public hearing, and held the public hearing in a manner required by the law and its regulations;

3. The Department considered all timely and relevant public comments in making its determination;

4. The record supports the issuance of a subaqueous permit and water certification based upon the draft permit and the findings consistent with the Subaqueous Lands Act;

5. The record supports the issuance of a solid waste permit to construct and operate the proposed solid waste transfer station for construction and demolition waste as

set forth in the application, subject to the reasonable and appropriate conditions that the Department shall impose to protect the environment and public health;

6. The duly authorized Department officials shall prepare and issue permits consistent with this Order; and

7. The Department shall provide notice of this Order to the persons affected by this Order, as determined by the Department, including those persons who participated in the hearing process.

s/ *John A. Hughes*
John A. Hughes
Secretary

HEARING OFFICER'S REPORT

TO: The Honorable John A. Hughes
Secretary, Department of Natural Resources and Environmental Control

FROM: Robert P. Haynes, Esquire
Senior Hearing Officer, Office of the Secretary
Department of Natural Resources and Environmental Control

RE: Application of Alma, L.L.C. for a Water Quality Certification and Subaqueous Lands Permit for Docking, Dredging and Construction Activities in Subaqueous Lands at 601 Christiana Avenue, Wilmington
and
Application of Alma, L.L.C. and Delaware C & D Recycling, L.L.C. for a Solid Waste Permit to Construct and Operate a Solid Waste Transfer Station for Construction and Demolition Solid Waste at 601 Christiana Avenue, Wilmington

DATE: December 19, 2006

I. BACKGROUND AND PROCEDURAL HISTORY

The Department of Natural Resources and Environmental Control ("DNREC" or "Department") held a public hearing on August 30, 2006, in order to consider public comments on separate, but related, permit applications.

On March 22, 2006, Alma Properties, L.L.C. ("Alma") requested that the Department's Division of Water Resources ("DWR"), Wetlands and Subaqueous Lands Section ("WSLS") permit[1] the construction of boat docking facilities and structures, the placement of fill and dredging in subaqueous lands in the Christina River at Alma's property located at 601 Christiana Avenue, Wilmington, New Castle County ("Property"). Alma indicated that it was withdrawing an October 17, 2005, permit application, which had sought approval of similar regulated activities.[2] The purpose was to build docking facilities for a solid waste transfer station that would use barge transportation to move construction and demolition ("C&D") solid waste to a location for final disposal or reuse.

[1] The Secretary delegated to DWR the authority to issue subaqueous permits.
[2] Alma had submitted applications that had public notices published on August 3, 2005 and October 26, 2005.

On April 12, 2006, WSLS provided public notice of the subaqueous permit application. This notice established a May 1, 2006, deadline for any meritorious request for a public hearing. The Department received public comments from the Natural Heritage Program and comments and requests for a public hearing from William Moyer and Alan Muller on behalf of Green Delaware.[3] Alma submitted a response in an August 14, 2006, letter to some of the written public comments. On May, 1, 2006, Mr. Moyer withdrew his request for a hearing stating that his concerns had been satisfied.

In an application dated March 31, 2006, Alma and Delaware C & D Recycling, L.L.C. ("DCDR") jointly submitted the second application that was the subject of the August 30, 2006, hearing. This application requested that the Department's Division of Air and Waste Management ("DAWM"), Solid and Hazardous Waste Management Branch ("SHWMB") permit[4] the construction and operation of a solid waste transfer station for C&D solid waste at the Property. This application also indicated that a July 29, 2005, solid waste permit application was being withdrawn. SHWMB requested additional information, which DCDR/Alma provided in March 2006. On May 4, 2006, SHWMB determined that the solid waste application was administratively complete. Consequently, the Department published public notice on May 7, 2006, which set a May 23, 2006, deadline for any meritorious request for a public hearing. On May 23, 2006, Alan Muller on behalf of Green Delaware submitted a request for a public hearing on the solid waste application.

The Department determined that the two applications shared common issues of fact and that a combined public hearing would be administratively efficient because both applications were needed to construct the proposed solid waste transfer station. A duly noticed hearing was held August 30, 2006, at the Department's office at Lukens Drive, New Castle, New Castle

[3] The Department did not receive timely requests for a hearing from all these persons.
[4] The Secretary delegated the authority to issue solid waste permits to DAWM

County. Several persons attended and provided written and oral comments. There was a request to keep the public hearing record open for thirty days, which Alma opposed. I allowed the public hearing record for written public comments to remain open until September 13, 2006, but the Department did not receive any further public comments by this deadline. Alma submitted a response to certain public comments on September 12, 2006.

II. SUMMARY OF THE PUBLIC HEARING RECORD

The public hearing record contains a verbatim transcript of the public hearing. At the public hearing, SHWMB's David Perrego introduced into the hearing record[5] the transfer station application and related correspondence, the public notices, and the written public comments. WSLS' Joanne Haughey introduced into the hearing record the subaqueous application and related correspondence, the public notices, Alma's August 14, 2006, response, and written public comments.

Jesse Lindsay, an engineer with Whitney, Bailey, Cox and Magnini, Alma's consulting engineering firm, made a presentation on the proposed transfer station project, which he described as constructing a building and barge docking facility to transfer C&D solid waste received from trucks. The C & D waste would be transported via barge for final disposal or reuse. He indicated that the City of Wilmington and the Delaware Department of Transportation did not require any further studies. He also said that the proposed location was a former contaminated industrial site, but that the site's reuse was consistent with the Department's approved remediation plan for the Property. He described the proposed dredging as occurring in two phases, with phase one consisting of the removal of 6,500 cubic yards of dredge materials from the subaqueous lands in the Christina River to the north of the proposed transfer station and

[5] The Department does not have an obligation to develop the public hearing record. The Department remains neutral on the merits of a pending permit application until after the public hearing, but the Department develops a basic public hearing record for the public's benefit.

phase two consisting of the removal of 18,000 cubic yards to the west of the proposed phase one dredge site. The dredged material will be transported to a permitted location.

Alan Muller on behalf of Green Delaware raised concerns with the Coastal Zone Act's status decision, and the environmental clean-up of the site, and the environmental impact of truck emissions.

David Clements presented comments on behalf of Local 1694-1, International Longshoremen Association, which is a bargaining unit of employees at the Port of Wilmington. The Port is located immediately to the south of the Property, and Mr. Clements questioned the subaqueous application's lack of proper documentation on the disposal of the dredged materials at White's Basin in New Jersey. He further questioned if there were errors in the application's supporting documents on the testing of sediment samples taken from the area that would be dredged. Finally, he also raised the possible adverse economic impact on the Port of Wilmington's operations from dust and the potential to expand the operations beyond a solid waste transfer station.

Marvin Thomas, President of Southridge Civic Association, an association of residents who live near the Property, opposed the permit applications because of the adverse impact on his neighborhood from increased truck activity. Terry Foley and John Kearney also spoke in opposition to the permit applications. WSLS requested that Alma respond to the public comments, and Alma provided a response dated September 12, 2006.[6]

The Department has considered all the comments in making its decision; however, the comments that will be discussed here are 1) the reuse of a former contaminated industrial site, 2)

[6] The Department may investigate the applications after a public hearing in order to develop an administrative record that supports the Department's final decision. The public hearing process is an important part of the Department's decision-making process as it often raises issues that require further investigation.

the environmental impacts from the solid waste transfer station, 3) the dredging needed for the barge transportation, and 4) the possible harm to the Port of Wilmington's operations.

III. DISCUSSION AND REASONS

WSLS prepared a memorandum to answer certain questions and a draft permit, which are attached hereto as Appendix A and incorporated herein.[7] In addition, WSLS applied its expertise to the regulatory findings required by the Department's *Regulations Governing The Use of Subaqueous Lands.* These include assessing the including public use, environmental impact, and other considerations. The draft permit highlights specific and standard permit conditions that the Department's technical experts recommend imposing if the Secretary determines that the subaqueous permit should be issued. I find that the record supports approval of the subaqueous permit, subject to WSLS's reasonable permit conditions, which are appropriate to protect the environment and public health.

Similarly, SHWMB indicated that Alma and DCDR have satisfied all of the Department's technical concerns and that the solid waste application supports issuance of a solid waste permit; subject to reasonable permit conditions appropriate to protect the environment and public health. I find that the Department's technical experts' advice and opinion are well-supported, and that reasonable permit conditions will protect the environment and public health from possible risks of harm.

The first issue raised was the possible re-use of a former industrial site that had been subject of a Department environmental remediation. The Property is part of the former F. A. Potts and Co. International, Inc., which was a sixty six acre tract that was the subject of the Department's *Hazardous Substance Cleanup Act, 7 Del. Chap. 91* investigation. In addition, the Property also received a Coastal Zone Act status decision that allowed the proposed solid waste

[7] WSLS' memorandum was prepared in response to the public hearing record to assist this Hearing Officer in his review of the public hearing record and to provide technical advice.

transfer station to proceed without a Coastal Zone Act permit. This issue was raised at the public hearing, but the Department's prior final decision will not be revisited here.

The Department's investigation concluded with the Department's approval of an "Amended Final Plan of Remedial Action for the Potts Property Site, Wilmington, Delaware" in DNREC Project No. DE-0169, dated August 2000. The Department's Site Investigation and Restoration Branch ("SIRB") within DAWM administers the HSCA plans, and has indicated that the construction and operation of the proposed solid waste transfer station are consistent with the approved final plan. Indeed, the reuse of the industrial site is consistent with the Department's efforts to encourage reuse of industrial sites. SIRB selected a containment remedy that requires a low permeability cover to be installed over most of the site, the removal of subsurface petroleum products, and the establishment of a ground water management zone.

I find that the proposed transfer station is consistent with the approved plan of remedial action. I find the proposed reuse of an industrial site is consistent with the Department's policies that encourage such reuse. In addition, the proposed dredging of the Christina River to a depth of 18 feet will remove contaminated sediments, which otherwise cannot be effectively covered insofar as they are under water. Thus, the issuance of the permits will benefit the environment from the removal of contaminants from the Christina River's environment, and will allow a beneficial reuse of an existing industrial site consistent with the Department's approved plan of remedial action.

The second issue raised was the environmental impacts from building and operating a solid waste transfer station, and the public hearing included comments on the impacts from the dredging and truck traffic. The environmental impacts were evaluated in the Department's solid waste application's required environmental assessment, which was prepared by Brightfields, Inc., Alma's environmental consultants. In addition, the subaqueous application included an

environmental study prepared by Versar, Inc. and entitled "Intensive Sediment Testing and Contaminant Mapping, Delaware C & D Recycling Facility Project, Christina River" dated July 2006. I find that these studies support the approval of the solid waste transfer station because they provide a thorough examination of the environmental impacts of the solid waste transfer station. Alma's September 12, 2006, response to public comments included the explanation for certain missing data in the Versar study. I find Alma's explanation satisfactory, and that the claimed mistakes were not material to the overall study of the contaminants in the area to be dredged.

The subject of greatest public concern was the proposed dredging in order to accommodate the barge method of transportation. Alma proposes to dredge in two phases over five years. The phasing is to allow for phased expansion of the docking facilities to meet the anticipated growing demand for the C&D transfer station. In phase one, Alma intends to dredge to depth of 18 feet in the area needed for docking the barges, which will require the removal of approximately 6,500 cubic yards of dredge materials. Phase one also will entail constructing a 30 foot wide by 95 foot pier into the Christina River, and a 42 foot wide by 70 foot long dock; and associated facilities to handle a typical barge that is 260 feet long and 53 feet wide. The second phase is to remove 18,000 cubic yards in order to construct a second pier and dock up river, or west, from the first dock and pier. The total proposed dredging would be 24,500 cubic yards using a mechanical dredger. Of note, this application reflects a decrease from Alma's prior application, which proposed to dredge 90,000 cubic yards, to load the barges from a dock to be built along the shoreline, and to use a hydraulic dredging.

I find that the record supports the proposed dredging and that the dredging application should be approved consistent with the Department's regulations. There was an issue raised with the dredging depth, but Alma provided a response that the tugboats needed more depth and the

difference between the draft of a fully loaded barge and the dredge depth provides an adequate margin to prevent grounding of the barges or the tugboats. The dredging will also be regulated to control any adverse impact on the water quality through the proposed permit conditions that will minimize turbidity and require that the work be done in compliance with water quality standards.

The other issue raised with the dredging was the disposal of the dredged materials. The extensive sampling of the area to be dredged shows that much of the surface area is contaminated, while the lower levels of sediment are not. The uncontaminated material will be taken to White's Basin, a permitted dredge material storage site in New Jersey. The contaminated dredge materials will be taken to facilities that are approved for the disposal or reuse of such materials. The application supports the dredging as part of the environmental cleanup of the Christina River from contamination from prior uses. Based upon the application, I find that the proposed dredging will aid in the removal of contaminated sediment in the subaqueous lands in the Christina River and the removal will benefit Delaware's environment and public health.

The issue of Alma's receipt of all permits was raised, particularly for the disposal of the dredge materials. The Department can condition a permit to require that Alma obtain all necessary permits, which should satisfy this concern. The conditioning of a permit upon receipt of other permits allows the permit approval process to proceed without undue delay because it allows multiple permit applications to be submitted with various state and federal agencies, although the permits may be issued with the condition that all necessary permits for dredging must be received prior to the initiation of the work approved by permit; i.e., all dredging approvals must be received before dredging may commence.

Besides the dredging, the public comments opposed the transfer station because of the increased truck traffic and associated air pollution. This issue thoroughly was discussed in the application's environmental assessment, which I find reasonably calculates the potential impacts. I find that the increased truck traffic to serve an already industrial location is reasonable, and that the Delaware Department of Transportation did not object to the proposed transfer station. The same roads are now used by trucks to access the Port of Wilmington, and the solid waste transfer station will not materially harm the local environment from its current use as a major truck route. I further find that the use of barges to transport the C&D waste from the transfer station will result in significantly lower emissions of nitrous oxide, a pollutant that causes ozone, than if trucks were used to remove the C&D waste. The fact that the Property is an industrial site means that it will need transportation of goods and materials for any future industrial use. The proposed use as a transfer station will have C&D waste arrive by truck and leave by barge, as opposed to other Delaware transfer stations that uses trucks to haul the collected waste to the final disposal location.

The record shows that using one loaded barge will mean that 350 trucks are not needed for the transportation, which will result in less traffic congestion and improved air quality. The proposed facility anticipates between 7 and 9 trucks arriving an hour initially, and then increasing to between 22 and 29 trucks as the full planned capacity is used. The application proposes to serve a region identified as 2 to 3 hours from Wilmington, and the facility is designed to handle up to 3,205 tons per day of C&D waste. The waste would be received from 7 a.m. to 5 p.m. weekdays and 7 a.m. to noon on Saturday, or 55 hours a week. The application requests extended receiving hours up to 24 hours a day and 7 days a week, as required. The application seeks no time restriction on the waste handling or its removal by barge.

The Department generally imposes reasonable limits on the receipt of waste in its transfer station permits, but most permits are for the transfer of municipal solid waste, which is far different than C&D waste. Nevertheless, the Department is concerned with the hours of operation and the impact on the local environment from increased truck traffic. The potential increase in truck traffic on the local streets may be almost 300 a day. The Delaware Department of Transportation has primary jurisdiction to regulate traffic impacts, and this agency has not objected to the proposed transfer station. Moreover, the Port of Wilmington is adjacent and receives numerous more trucks a day and at all hours. The trucks to the Port and the proposed transfer station will use Christina Avenue from the interstate. The proposed transfer station will be unique in Delaware in that it will use barge transportation, and this method warrants more flexibility in the hours when waste may be received, particularly if it means having the truck traffic occur during off-peak traffic hours and in the evening for air quality benefits. Thus, I recommend that the Department permit normal reasonable hours of operation and flow limits based upon the application, and the operational flexibility to extend the hours consistent with protecting the environment and public health.

I find that there are other environmental benefits from issuing the permits, namely, that less C&D waste will be placed in Delaware's landfills. Indeed, the Department has acted to require the diversion of yard waste from a Delaware landfill in order to preserve the landfill's remaining capacity for solid waste that is not as readily recyclable. There also will be an environmental benefit because the C&D waste will be reused for beneficial purposes to the extent feasible. This supports approval of the permits as consistent with the Department policies that encourage recycling. Any reuse of the C&D waste provides another environmental benefit, albeit one that the Department has not required for C&D solid waste transfer station permits.

Nevertheless, when given the opportunity to encourage voluntary recycling efforts in issuing a permit, the Department should do so.

The public comments raised an issue with the construction because it will occur in an 100 year flood plain. Alma proposes to add an estimated 30,000 cubic yards of fill to elevate the solid waste transfer building above the 100 year flood plain. Alma obtained approval from the City of Wilmington to construct the solid waste transfer building in the 100 year flood plain. This approval and the fact that the solid waste will be handled above the 100 year flood plain, which will satisfy the Department's *Regulations Governing the Solid Waste.*

The last issue raised was the impact on the Port of Wilmington. The impact identified the dust that could migrate to the Port of Wilmington's property. Any permit issued will require that all dust or other air borne contaminants be controlled. The economic impact on the Port of Wilmington from possible competition is not relevant at this time because the permit will strictly limit the operations to C&D solid waste. Should the solid waste transfer station be modified for another purpose, then that would be subject of the Department's approval, which is when the concern about competition can be raised.

IV. RECOMMENDED FINDINGS AND CONCLUSIONS

Based on the record developed, I find and conclude that the record supports approval of the permits for the solid waste transfer station and the regulated activities in subaqueous lands. I recommend the Secretary adopt the following findings and conclusions:

1. The Department has jurisdiction under its statutory authority to make a determination in this proceeding;

2. The Department provided adequate public notice of the proceeding and the public hearing in a manner required by the law and regulations;

3. The Department held a public hearing in a manner required by the law and regulations;

4. The Department considered all timely and relevant public comments in making its determination;

5. The Department should issue Alma a permit for the following activities in subaqueous lands, as set forth in detail in the draft permit and the application;

6. The Department shall issue a permit to Alma and DCDR for the construction and operation of a solid waste transfer station, as set forth in detail in the application, for use in transferring C&D waste from collection trucks and loading it on to barges for removal to a permitted location for proper disposal or reuse; and

7. The Department shall serve a copy of this Order on each person who participated in the public hearing process, or the Department otherwise determines may be affected by this Order.

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Robert P. Haynes, Esquire
Senior Hearing Officer

MEMORANDUM

To: Robert Haynes, Esquire, Hearing Officer

Through: Kevin Donnelly, Director, Division of Water Resources
Laura Herr, Section Manager Wetlands and Subaqueous Lands Section

From: Joanne Haughey, Environmental Scientist
Division of Water Resources, Wetlands and Subaqueous Lands Section

Date: December 19, 2006

Subject: Wetlands and Subaqueous Lands Section Findings - ALMA, LLC

RESPONSE TO THE HEARING OFFICER'S QUESTIONS

Does the proposed destination for the dredge spoils satisfy the Department's environmental concerns and regulations?

ALMA, LLC (ALMA) has performed extensive sampling to determine the level of contamination in the sediments and has found that some of the sediments contain elevated levels of heavy metals. They have proposed disposal of the clean sediment at White's Basin in Logan Township, New Jersey and disposal of contaminated sediment at one of a number of approved solid waste treatment facilities identified in the permit application.

Disposal of the sediments will be subject to the regulatory requirements of the state in which the material will be discharged, as well as the permit conditions of the State of Delaware. In order to place the sediments at White's Basin, the sediment cannot exceed New Jersey Non-Residential Direct Soil Cleanup Criteria (NRDCSCC). All sediments exceeding these levels will be disposed of at a solid waste treatment facility capable of handling the higher contaminant levels.

It is the determination of the Wetland and Subaqueous Lands Section (WSLS) that the proposed two-tiered disposal method is appropriate and that it satisfies the Department's environmental concerns and regulations. If directed by the Secretary to issue a permit, the WSLS will include special permit conditions to ensure that the disposal of all dredged material will be handled in an appropriate manner.

Does the proposed depth of the dredging pose any environmental concerns that could be reduced through a different depth in the permit or permit conditions?

The proposed dredging depth is 18 feet below mean low water. The analytical results from the sediment sampling show that the metal contaminants are more widely spread and have higher concentrations in the upper layers of the sediments. Removal of the upper layer of sediments will result in a cleaner environment for benthic organisms. This could produce a beneficial impact for the upper levels of the food chain that are dependent on benthic species as a food resource. The proposed depth will result in cleaner sediments and therefore does not pose environmental concerns for the WSLS.

Please address any hazardous waste issues that were raised by the proposed dredging and indicate how that will be addressed if the permit is issued.

Because of the elevated concentrations of metals in the sediment, there is concern that contaminant dispersal will occur during dredging. If the permit is issued, the WSLS recommends that the following practices be employed to contain sediments and that these practices be required as conditions of the permit:

- The permittee should be required to use a closed clamshell bucket to contain excavated sediments during movement through the water column and air. This will minimize any aerial release of the sediments, as well as release in the water column.

- The dredge operator should be required to move the bucket in a controlled manner, at a maximum rate of two feet per second while in the water, to minimize the disturbance of sediments, and thus minimize dispersal of sediments in the water column.

- The dredge operator should be required to excavate a maximum bite for each bucketful of sediment to minimize the movement of the sediment and ultimately its dispersal through the water column.

- The dredging should be monitored downstream of the dredging, dependent on the direction of tidal flow, to ensure that the turbidity levels in the water column do not exceed ambient conditions by more than 10 Nephelometric Turbidity Units. If turbidity exceeds this requirement, the dredging should cease until background levels are reached.

- The permit should be conditioned so that all dredged materials and effluent will be contained in the barge. No overflow of sediments or effluent from the barge should be permitted.

Given these special restrictions, impacts from the dredging will be minimized, while reducing the level of contaminants in the Christina River sediments.

Please also review the application of the regulations to the permit application and indicate if the application satisfies them and the record as a whole supports issuance of a permit, subject to reasonable conditions to protect the environment and public health.

The WSLS has completed a thorough review of the permit application and has determined that the record supports the issuance of a Subaqueous Lands Permit and Water Quality Certification with special conditions to protect the environment and human health.

REGULATORY REVIEW

The WSLS has jurisdiction over the in-water portions of the ALMA project in accordance with 7 Del. C., Chapter 72, the Subaqueous Lands Act (Act), and the "Regulations Governing the Use of Subaqueous Lands" (Regulations). The regulated activities include all structures constructed channelward of the mean high water line or the ordinary high water line, i.e., the construction of the industrial pier and dock complex, the stormwater management outfall and the dredging operation. The WSLS also has authority to issue Water Quality Certification for fill activities in waters under Section 401 of the federal Clean Water Act. The activity subject to Water Quality Certification at the ALMA site is limited to the pouring of the concrete into the piles for the structures.

SUBAQUEOUS LANDS REVIEW

The overall project will be reviewed in accordance with the Act and Regulations, with Water Quality Certification review limited to the pile construction. The purposes of the Regulations and the Act are to protect private and public subaqueous lands based on a review of the project's likely impacts on public use and the environment.

Public Use Review

Section 3.01 A of the Regulations requires that the WSLS consider how the public interest will be affected by the applicant's use of subaqueous lands. This review is required to evaluate impacts to the public and the potential for the impacts to be minimized or avoided.

The ALMA property is located adjacent to the Christina River. As waterfront property owners, ALMA has a right to wharf out on to public subaqueous lands, subject to State regulations and considerations of the Public Trust Doctrine. The portions of the river channelward of the mean low water line are public waters held in trust by the City of Wilmington for the people of the State. The majority of the dredging and portions of the industrial pier and dock facility are located on public trust lands. It is the duty of the State to weigh the riparian owner's rights to water access with the public's right to use public trust lands.

The construction of the pier and dock structures reduces the public's access for navigation and recreation at the location of the structure on the Christina River. However, this impact is minor because the Christina River is wide enough in the vicinity of the ALMA property to accommodate multiple uses and is located in an area already impacted by large vessel traffic

at the Port of Wilmington. The industrial character of the river at this location also reduces the overall attractiveness of the area for recreational use. The benefits of the project to the public are an increase in commerce and the potential for additional employment offered by the facility. An additional public benefit is that the facility will recycle construction materials that would likely end up in the State's space-stressed landfills.

Sections 3.01A.5 and 6 require the Department to consider alternatives that would avoid the use of subaqueous lands and "the extent to which the applicant's primary purpose and objectives can be realized by alternatives, i.e. minimize the scope or extent of an activity or project and its adverse impact." Toward that end, and through an iterative design process, ALMA LLC has minimized impacts to subaqueous lands.

As will be discussed in the Environmental Impact Review Section below, the final design avoids many adverse impacts and minimizes unavoidable impacts to subaqueous lands while achieving the project purpose - the berthing of barges. The current plan eliminates the originally proposed bulkhead and reduces the volume of dredged material from 89,000 cubic yards of sediment to 24,500 cubic yards. While not all impacts will be eliminated, this reduction greatly minimizes the need for dredging in sensitive shallow and intertidal waters. Remaining adverse impacts include those portions of the shallow water and intertidal lands which will be impacted by the presence of the pier, and those subaqueous lands within the area proposed for dredging.

Environmental Impact Review

Section 7203(b) of the Statute and Section 3 of the Regulations requires an environmental assessment of the impact on subaqueous lands by a proposed activity.

Species and Habitat Review

Section 3.01B of the Regulations requires a broad evaluation of the potential for adverse impacts to the environment, including effects on aquatic or tidal vegetation, benthic organisms, shellfish and finfish, groundwater hydrology and sediment transport functions.

In accordance with regulatory requirements for new dredging projects, ALMA performed a benthic survey in the Christina River adjacent to the project site. Versar, Inc. performed benthic sampling at five stations in the Christina River adjacent to the ALMA site. The results of the survey indicate that there were a high number of total taxa at the site, relative to nearby Delaware River sample stations. The organisms at the ALMA site were taxa with generally high tolerance to poor water quality or invasive, non-native species. These taxa, according to the Versar report, are typical of tidal fresh and oligohaline environment, such as this portion of the Christina River. The dredging project will cause a temporary impact to benthic organisms. It is likely that the areas impacted by the dredging will be recolonized by similar taxa or potentially, if sediment quality increases, species indicative of better water quality.

The Delaware Natural Heritage Program stated that there were no State rare or federally endangered species at the ALMA site or in the work area. In order to be protective of

anadromous fish species, the WSLS will place a restriction on the placing of piles and dredging operations during the period between March 15th and June 30th of any given year. Any effect on finfishing, shell fishing and other resource related recreational or commercial activities should be minimal.

The dredging will not result in the long-term loss of intertidal habitat or tidal vegetation, but will result in a temporary disturbance of the benthic habitat resulting from the proposed alteration of the riverbed by dredging. Permanent but minor losses of habitat will occur in the locations of the piles for the structures. Impacts resulting from the alteration of underwater lands should be offset by the removal of contaminated sediments from the riverbed.

The WSLS has determined that the impact to the natural aquatic ecosystem will be temporary and minimal and that there will be no significant impacts to natural surface or groundwater hydrology.

Site Contamination and Dredging Review

The ALMA site is located at the former Potts Property. A remedial action to clean up contaminants at the site was undertaken with the Department's Site Investigation and Restoration Branch (SIRB) to remediate contamination at this property and the surrounding properties. The contaminants of concern at the Potts Property (currently the ALMA site) were metals. Carbon disulfide was a chemical of concern at a nearby site and it has recently been found in groundwater monitoring wells at the ALMA site.

Groundwater

Remedial action has been taken at the Potts Property in compliance with the SIRB's requirements. The remedial action included placing an impermeable or semi-permeable cover over the contaminated soils. In a September 11, 2006 memorandum issued by the SIRB, the SIRB states that groundwater in the vicinity is still polluted and is currently being monitored for arsenic, manganese, ammonia nitrogen and cyanide. However, groundwater discharges, after mixing with the river water, do not exceed water quality standards established to protect aquatic life and human health. It is the WSLS's determination that the proposed project at the ALMA site does not increase impacts to the Christina River from the groundwater. Groundwater discharge from the site will not be altered by the project.

Sediments

ALMA undertook an extensive sediment sampling program in June 2006 in the vicinity of the Phase 1 portion of the dredging project. Sediments were sampled at 32 locations for metals and semi-volatiles. At each location, one sample was collected for four foot of proposed dredging depths. The samples were analyzed and compared to the New Jersey Non-Residential Direct Soil Cleanup Criteria (NRDCSCC), which is the regulatory tool used to evaluate which sediments are clean enough for untreated disposal in a facility in New Jersey, such as White's Basin. One composite sample was analyzed using the Toxicity Characteristic Leaching Procedure (TCLP) for metals, semi-volatiles and volatiles.

The analytical results indicate that 29 of 32 of the surface samples (between 0 and 4 feet) exceeded the NRDCSCC. The contaminants included copper, arsenic, beryllium, lead, thallium and zinc. Nine of the 15 middle and bottom samples did not contain any elevated metal concentration. Three of the contaminated samples contained low exceedances of beryllium. Three middle samples had exceedances of arsenic, lead, thallium and zinc. Lead was found to exceed the TCLP criteria.

It is the WSLS's determination that the removal and appropriate disposal of the contaminated sediments will ultimately improve sediment quality and habitat conditions in the Christina River, despite the likelihood that some contaminated materials will be dispersed and some lead may be dispersed during dredging. If the Secretary determines that issuance of the permit and water quality certification are warranted by the record, the WSLS recommends that special permit conditions be included to address the method, equipment, and monitoring of the dredging operation, as well as the disposal of the sediments.

During dredging, the WSLS recommends that ALMA be required to use a closed clamshell bucket to retain excavated sediments during movement through the water column and air. To minimize the release of sediments from the bucket, the dredge operator should be required to move the bucket in a controlled manner, at a maximum rate of two feet per second while in the water. The dredge operator should also be required to achieve a maximum bite for each bucketful of sediment. The WSLS recommends that dredging be monitored down-current of the dredging, dependent on the direction of tidal flow, to ensure that the turbidity levels in the water column do not exceed ambient conditions by more than 10 Nephelometric Turbidity Units. If turbidity exceeds this requirement, the dredging operation should cease until turbidity has reached background levels.

The WSLS recommends that any permit be conditioned so that all dredged materials and effluent will be contained in the barge. No overflow of sediments or effluent from the barge should be permitted.

If issued, the permit should require that uncontaminated dredged material be placed at White's Basin in Logan Township, New Jersey, a facility authorized by the State of New Jersey. The contaminated sediments, which exceed the permitted acceptance criteria established by the New Jersey Department of Environmental Protection for White's Basin, should be placed in a licensed solid waste treatment facility. The permittee should be required to produce a tare receipt for disposal of the contaminated sediments.

The WSLS recommends that the permit be conditioned so that the dredging cannot commence until all required disposal permits and authorizations are obtained, to include Water Quality Certification from the State of New Jersey.

Facility Operation

The WSLS review of the facility operation was limited to those activities which could directly impact subaqueous lands. For this facility, our concern was that materials being transferred into barges be contained to prevent accidental discharge into the water. The proposed plans indicate that the conveyor system will be completely enclosed. The discharge chute will be constructed with an adjustable height so that to the materials are discharged directly into the barge hold. It is the WSLS's expectation that this system will minimize accidental discharge to the Christina River.

Other Considerations

Section 3.01.C, Other Considerations, requires that the WSLS review the project for additional siting, public use and environmental considerations, some of which have been addressed in the previous sections of this document. The proposed pier and loading/unloading facility is largely constructed on public lands, but the impact would be minimal because the Christina River is wide enough at this location to handle multiple uses. The proposed project is a commercial docking facility located adjacent to the Port of Wilmington, and therefore the facility would fit in with the surrounding upland and subaqueous land structures and water uses. The operation of the site, as described in the permit application, would confine all materials and should not impact the State Water Quality Standards (Standards). If constructed, the WSLS recommends that special conditions be placed on the dredging operation so that the dredging complies with Water Quality Standards. These special conditions include monitoring of the turbidity, and the use of environmentally friendly techniques to minimize dispersal of the sediments. The project will not adversely impact shellfish, since no native shellfish were identified at the site. Impacts to finfish will be minimized by the restriction of the dredging and placing of piles during the anadromous fish spawning run.

Structure Requirements

Sections 3.02, 3.03, and 3.05 of the Regulations provide guidance for construction of all structures, for boat docking facilities and for dredging projects, respectively. The structure, as proposed, allows for adequate water circulation to support aquatic animals. Other than the loss of a small area of intertidal and underwater lands, the structure will have minimal impact on aquatic fauna. There are no tidal wetlands on the site.

Boat Docking Facilities

The WSLS has determined that the proposed structures are in compliance with the requirements of this section of the Regulations. Based on the provided information, the boat docking structures will not extend more than 20% of the width of the water body at mean low water. All portions of the structure are proposed to be more than ten feet from the federal navigation channel and ten feet from adjacent property lines as required. The proposed berthing area is not deeper than the depth of the Christina River. The regulations also require that structures be designed to minimize dredging. The final design of the project satisfies this critierion as well.

Dredging Considerations

The requirements for dredging have largely been considered in Environmental Impact Review Section of this document. ALMA has performed extensive sampling to quantify the contaminants and has identified appropriate disposal facilities. The WSLS has determined that the removal of the contaminants will provide a net gain for the environment. The recommendations made by the WSLS would minimize the adverse impacts from the dredging and disposal of the sediment.

WATER QUALITY CERTIFICATION REVIEW

The Water Quality Certification is limited to the review of the pouring of concrete into the pipe piles for strength and stability. The footprint of this impact is minimal in respect to the project. It is not anticipated that this portion of the project will impact water quality.

CONCLUSION

The Wetlands and Subaqueous Lands Section has completed a thorough review of the site conditions and permit application information, and has determined that ALMA has adequately addressed the relevant environmental and public use concerns for their proposed dredging and construction project. The WSLS believes that the record supports the issuance of an appropriately conditioned Subaqueous Lands Permit and Water Quality Certification for the project.