CALIFORNIA COASTAL COMMISSION
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W13a

November 13, 2012

Go to
the original staff report.

TO: Coastal Commissioners and Interested Parties

FROM: Alison Dettmer, Deputy Director
Cassidy Teufel, Environmental Scientist

SUBJECT: Addendum to Staff Report for CDP Application E-11-029, Taylor Mariculture LLC

This addendum provides revisions to the October 24, 2012 staff report on Taylor Mariculture's proposal to install a seed settling facility, shellfish nursery rafts, floating upwelling systems (FLUPSYs), and associated equipment on an existing pier and shipping berth, and construct and operate an onshore storage and seed washing facility.

REVISIONS

Page 4, Special Condition 2:

"**2. Maintenance Cleaning.** All maintenance cleaning operations of the raft hulls~~structures~~, raft floats, ~~racks,~~ and well infrastructure (not including floating upwelling system bins~~clam cultivation trays~~) shall be carried out onshore. All biofouling organisms and biological materials removed during these cleaning operations shall be collected and disposed of at an appropriate upland facility. Regular scraping of the floating upwelling system channels can occur on the rafts, provided that all biofouling organisms and biological materials are contained using tarps and/or screens. No discharge of untreated wash water or biofouling materials into Humboldt Bay shall occur during maintenance cleaning operations."

Page 12, first full paragraph:

"Each of the proposed nursery rafts would include 40 cultivation wells and each of the proposed FLUPSYs would include 60 upwelling bins that would extend below the rafts into the water column. These structures would be expected to attract fouling organisms over time and are proposed to be periodically removed and cleaned. Some of t~~T~~hese cleaning activities involve the use of a pressure washer, ~~or~~ hose, or scraping devices and are proposed to be carried out every several years on the hulls and floats of the FLUPSYs and nursery rafts themselves, with wash water and removed fouling organisms discharged into the bay. Other types of cleaning would be

carried out on the FLUPSY bins on a daily to weekly basis to remove biofilms from the bins that could restrict the flow rate of water and contribute to the colonization of fouling organisms. While the regular daily or weekly cleaning of the FLUPSY bins would not result in the removal or fragmentation of large amounts of viable biofouling material, the more substantial cleaning of the hulls, floats, and submerged infrastructure of the FLUPSYs and nursery rafts may result in the discharge and spread of invasive organisms. To address the potential risk that this latter cleaning activity would have with regard to the spread and dispersion of invasive marine species, the Commission is requiring Taylor in **Special Condition 2** to carry out the cleaning ~~and pressure washing~~ of the FLUPSYs, nursery rafts and cultivation well infrastructure in a manner that prevents discharge of biofouling materials and organisms to Humboldt Bay, including requirements to carry out some cleaning activities onshore and the requirement to collect and dispose of all removed biological material and organisms at an upland facility."

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November 9, 2012

By Hand Delivery

California Coastal Commissioners
45 Fremont Street, Suite 2000
San Francisco, CA 94105

Alison Dettmer
Deputy Director
California Coastal Commission
North Coast District Office
710 E Street, Suite 200
Eureka, CA 95501

Re: Wednesday, November 14, 2012 Meeting
Agenda Item 13(a)
CDP Application No. E-11-029
Taylor Mariculture LLC

Dear Commissioners:

I write on behalf of Freshwater Tissue Company LLC ("Freshwater") to comment on the October 24, 2012 Staff Report on Application No. E-11-029 by Taylor Mariculture LLC for a Coastal Development Permit to install aquaculture equipment at the "Berth Two" pier extending from the Samoa Peninsula into Humboldt Bay, owned by the Humboldt Bay Harbor, Recreation and Conservation District ("District"), and to construct seed washing facilities and a wash water discharge system on adjacent District uplands.

Freshwater is the owner of real property immediately to the west of the District's narrow shorefront strip of land. The largest parcel of Freshwater's property is the site of the former Louisiana-Pacific kraft pulp mill, which was constructed in the mid-1960s and which operated until October 2008. Freshwater acquired the mill and associated real property in February 2009. Most of the manufacturing equipment and several of the structures at the mill have been removed or demolished.

1. Access. The applicant's project description in the staff report includes, as one of eight elements, an access road. (Staff Report, pp. 2, 6). The report states:

> The project also includes a new storage shed and parking area onshore near the seed wash system on a previously developed site that is currently covered with asphalt. While access to the project would be provided across an adjacent developed

> property by way of an existing road, because an existing 20 foot wide culvert separates these two properties, completion of this access route would require the installation of a pre-fabricated 80-foot long one-lane vehicle bridge across the culvert to the north of the Berth Two pier. Bridge installation requires several small footings in areas of existing asphalt. (Staff Report, p. 8).

The Staff Report attaches, as Exhibit 1 ("Project Location"), an aerial photograph supplemented with diagrams of the location of the project facilities and identifying text. Exhibit 1 depicts the location of the "Access Road" that extends along a long solid fence north of the proposed project area and northward further to the site of the culvert where the bridge would be installed.

The statement in the Staff Report that there is an "existing road" in the position shown in Exhibit 1 is not accurate. To my knowledge – and I first worked at the mill in the 1970s – there has never been a road in this location. Rather, the area extending from the north end of the "Shed/Seed Washing Area" (just south of the tall fence over which the phrase "Access Road" is superimposed on Exhibit 1), northward to the culvert (and beyond), is unpaved and unimproved, is nearly covered with native vegetation typical of the Humboldt Bay shoreline on the Samoa Peninsula. There have apparently been recent occasions when someone drove over this area in what was likely a four-wheel drive vehicle, thereby flattening some grass and vegetation, but it is not reasonable to refer to the area as an "existing road." I attach photographs of the area, taken on November 9, 2012, depicting the condition of this land. Presumably significant improvements of this area – removal of vegetation and filling and/or paving, will be required in order to create a "road" capable of serving as an access road to an active aquaculture operation such as the one being proposed to the Commission. Removal of vegetation and construction of a road immediately adjacent to the shore of Humboldt Bay are not described in the staff report as part of the project.

We do not understand how the Commission could approve a Coastal Development Permit that does not address access issues based on facts as they exist on the ground.

2. Stormwater Discharge Near Project Site. The former pulp mill property has a comprehensive stormwater collection system that includes a discharge pipe located directly adjacent to the foot of the Berth Two pier. The facility has and adheres to an approved Stormwater Pollution Prevention Plan (SWPPP), but the fact remains that a wide variety of chemicals were used historically in the manufacture of pulp, and some are still located onsite. From the outset of the Taylor venture we have found the selection of this location for an aquaculture facility to be incongruous. Nowhere in the Staff Report is there any discussion of the compatibility of the proposed aquaculture project with historical uses of immediately adjacent upland properties.

3. Groundwater and Mass Flux Discharge Near Project Site. In a similar vein, the former pulp mill property is and for several years has been the subject of an investigation of conditions of soil and groundwater under the supervision of the North Coast Regional Water Quality Control Board ("Water Board"). This investigation has

resulted in the discovery of chlorinated volatile organic compounds ("VOCs") in the groundwater on the eastern portion of the former pulp mill property. These VOCs migrate in the direction of and are eventually discharged to the Bay directly in the area of the proposed aquaculture project facilities on Berth Two. According to an analysis recently prepared for Louisiana-Pacific, the mass discharge of these VOCs is approximately 35 grams per day, or more than 12.5 kilograms per year. Dilution factors in the immediate vicinity of the proposed project have not, to our knowledge, been analyzed or calculated, and the Water Board has not yet decided on a remedial approach for these VOC impacts to groundwater or the Bay. The detection and characterization of the VOC impacts to soil and groundwater, moreover, constitute only the first step in the Water Board's investigation of the pulp mill property, which has been focused so far only on the eastern edge of the property. The Water Board's planned investigation of conditions throughout the remainder of the property, where most of the historical manufacturing operations took place, has not yet commenced.

Here again, while we have no specific evidence that residual chemical impacts to soil and groundwater would impair the proposed aquaculture operations, it does not appear that this issue has been adequately addressed. It is not addressed at all in the Staff Report.

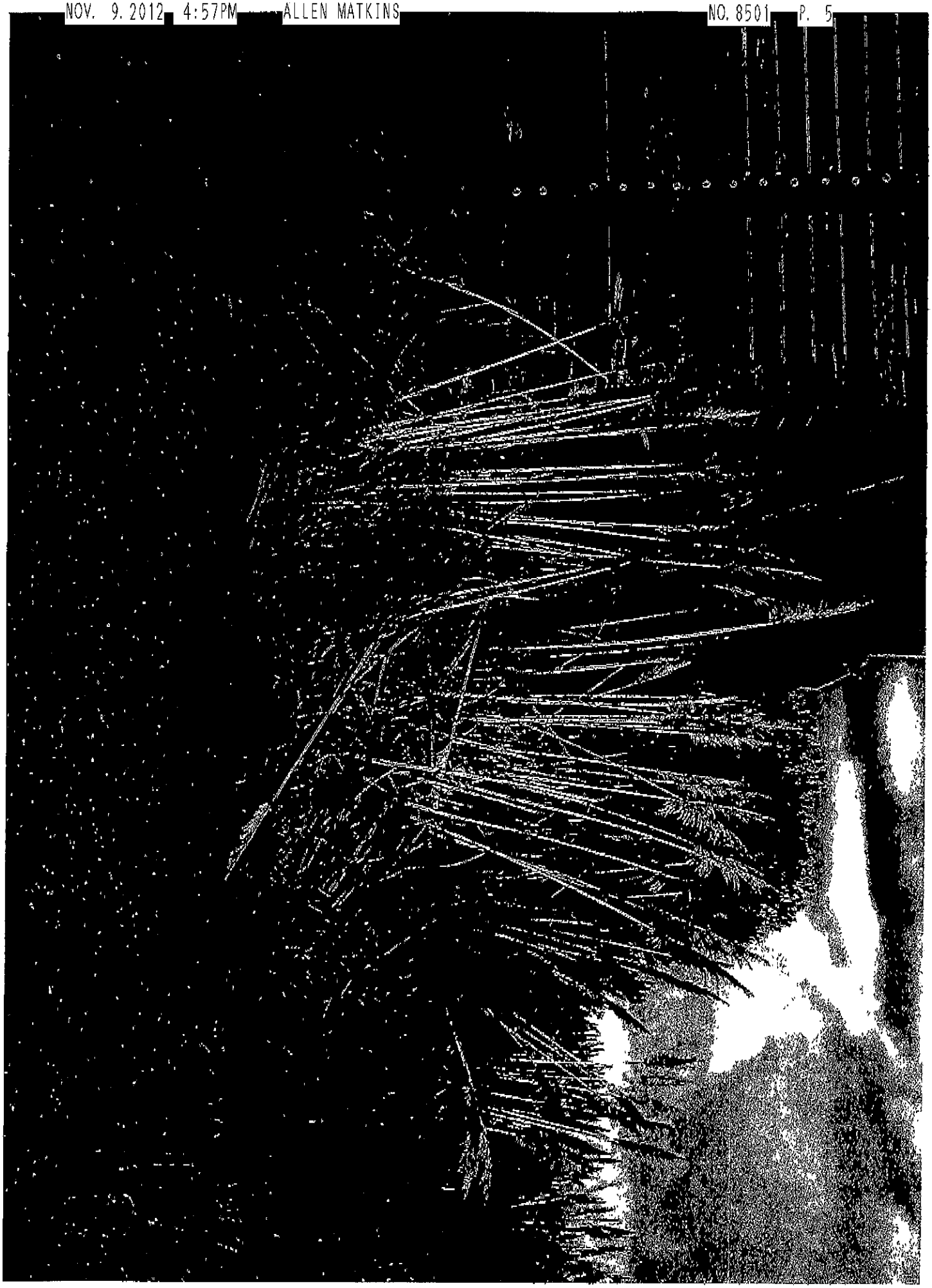
Based upon the concerns identified in this letter, Freshwater believes that the Staff Report inaccurately describes the project and insufficiently addresses the compatibility of the proposed project with historical uses in the project vicinity within the Coastal Zone. Accordingly, we would recommend that the Commission decline to approve the proposed permit, or at the least defer the decision until the access road issue is resolved and the proposed project's compatibility with the historical uses of the site are analyzed and better understood.

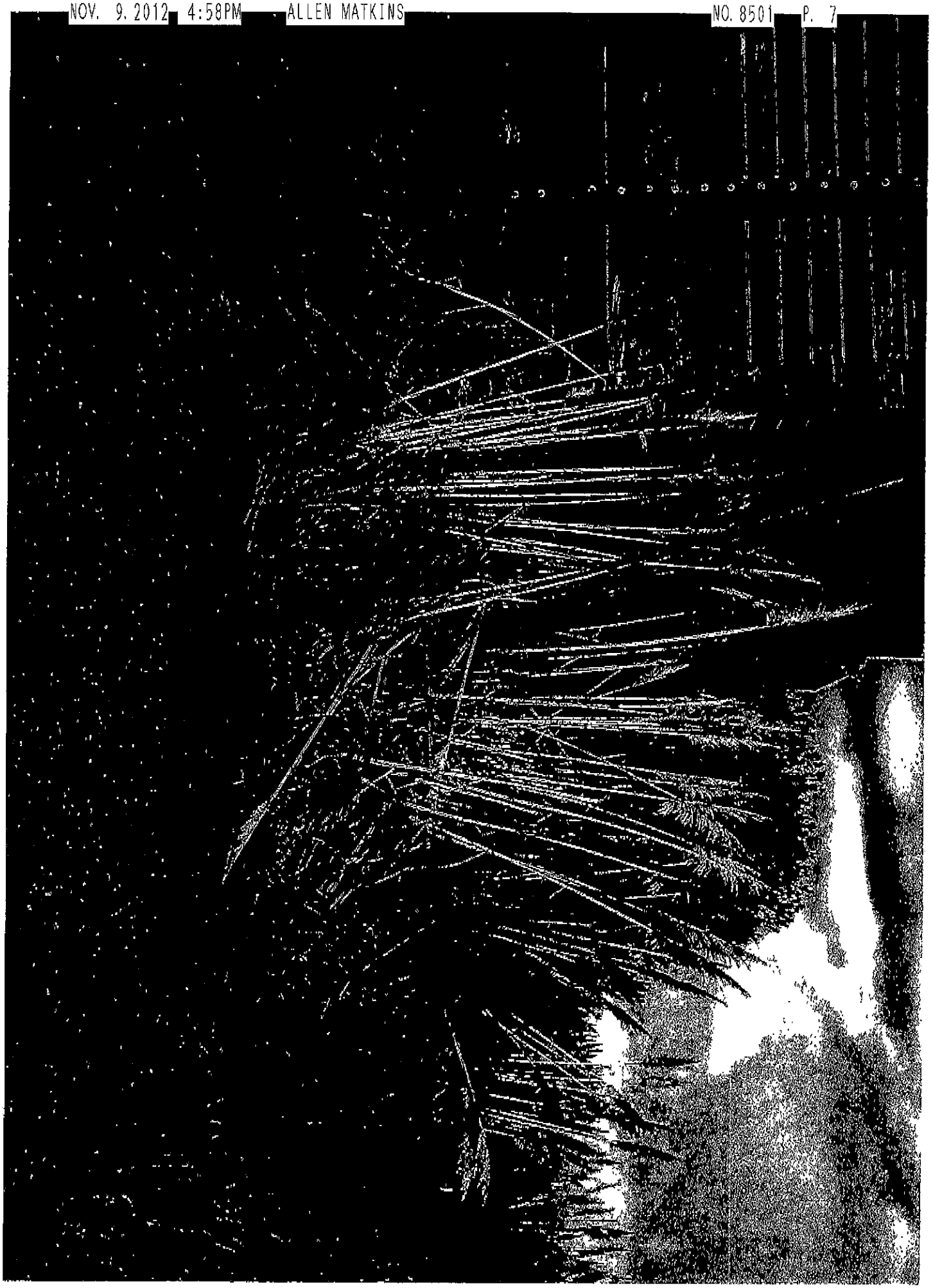
Thank you for your consideration of the foregoing comments.

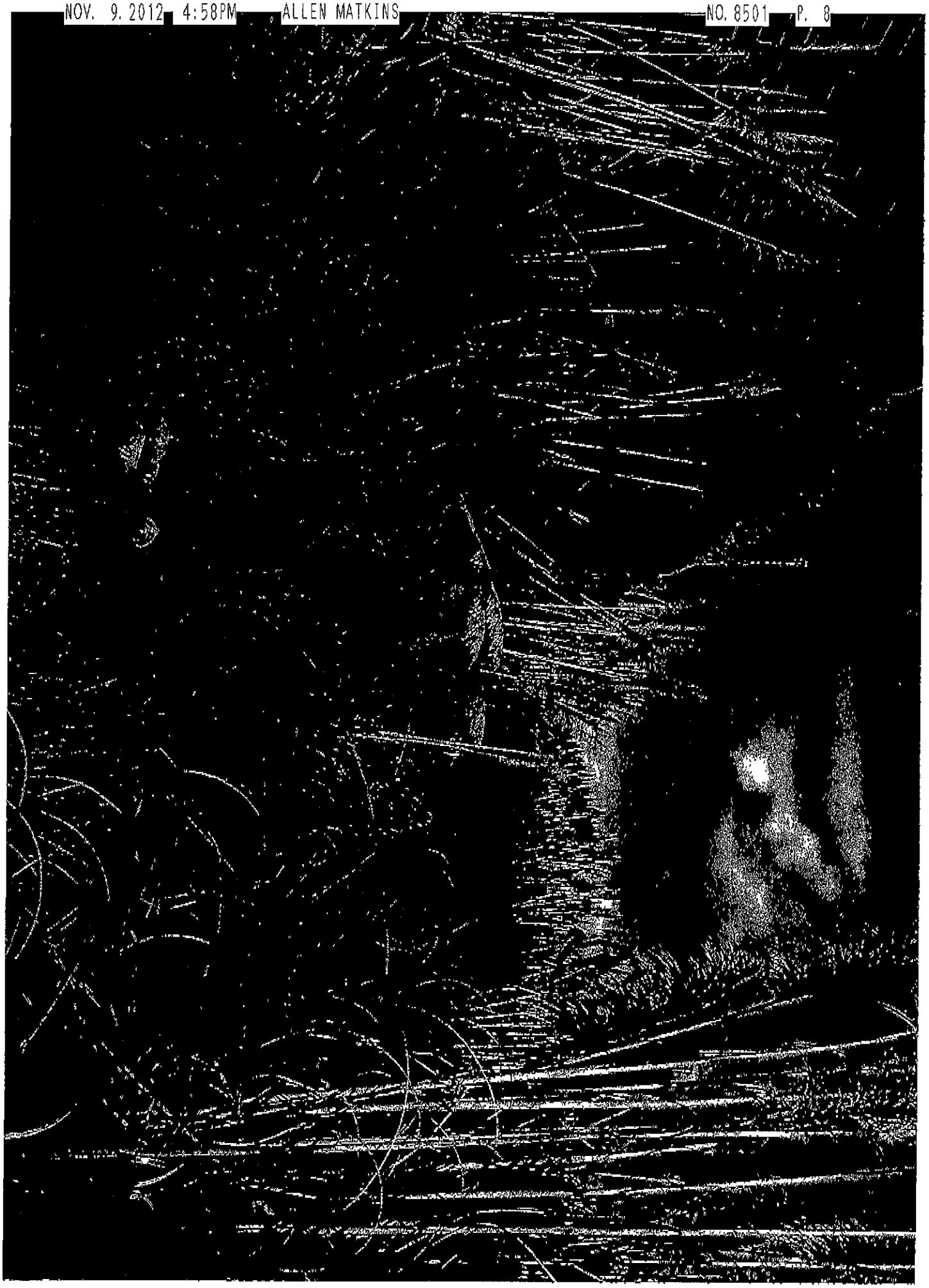
Sincerely,

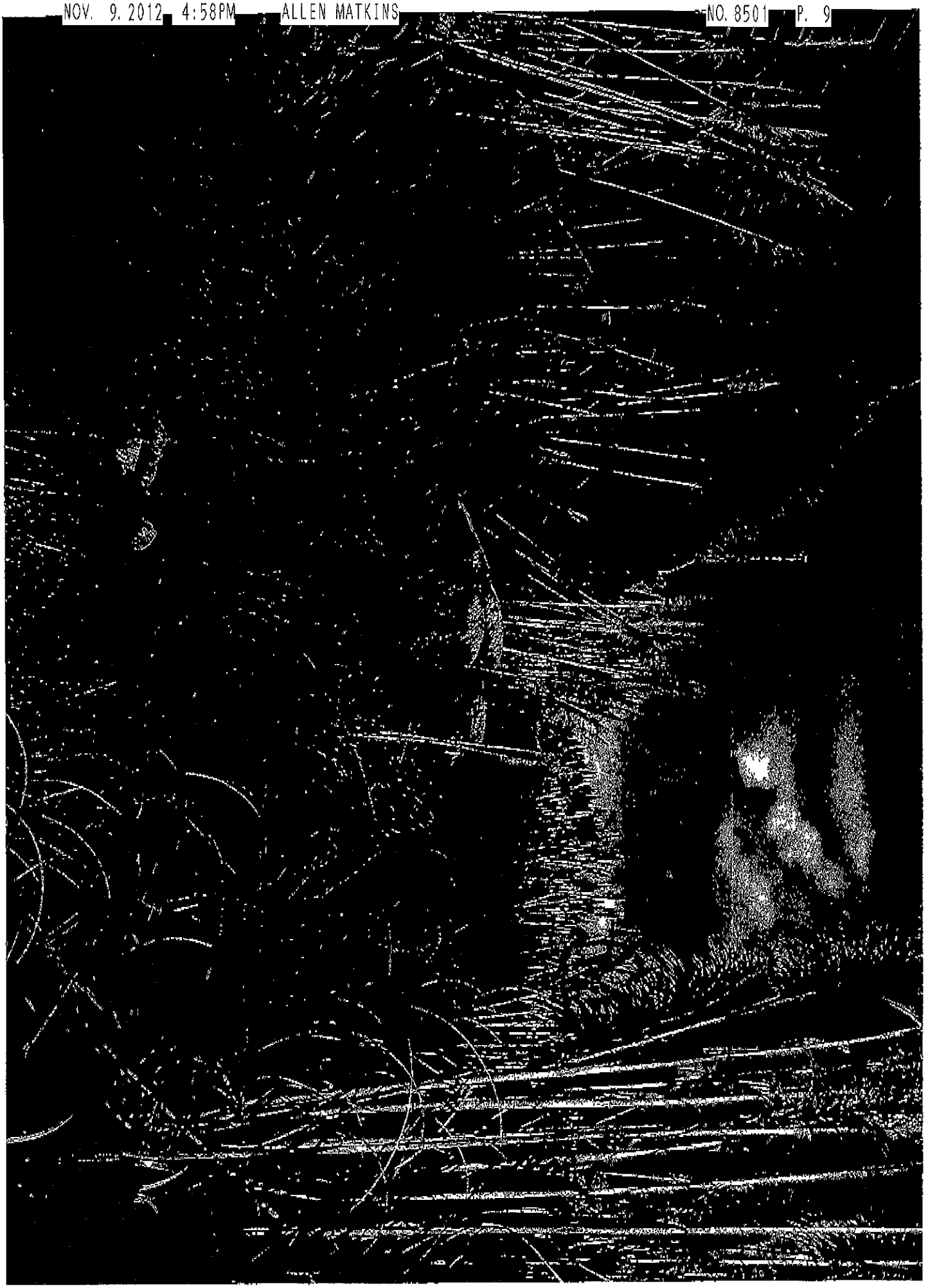
Robert Simpson
President

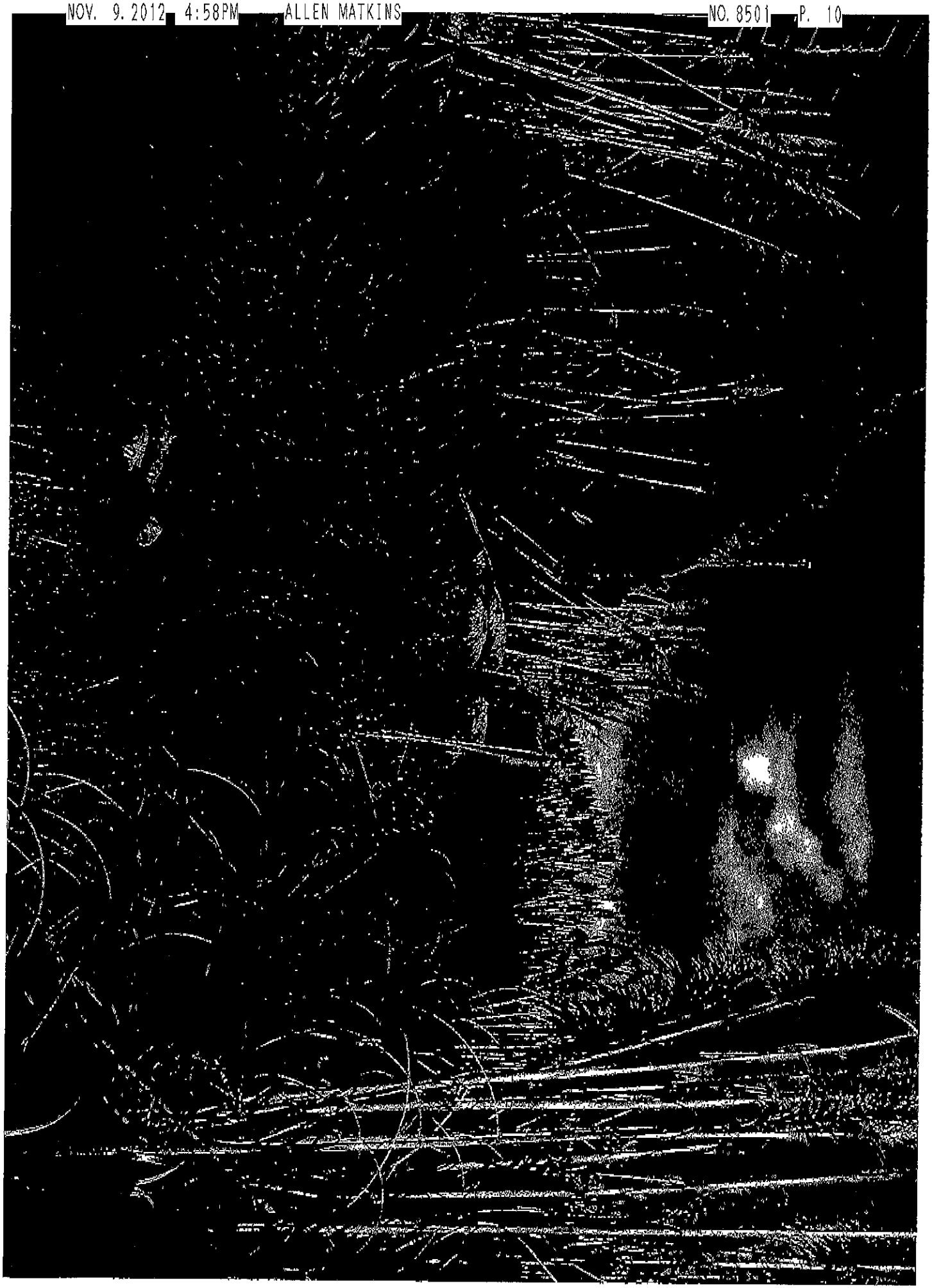
Enclosures

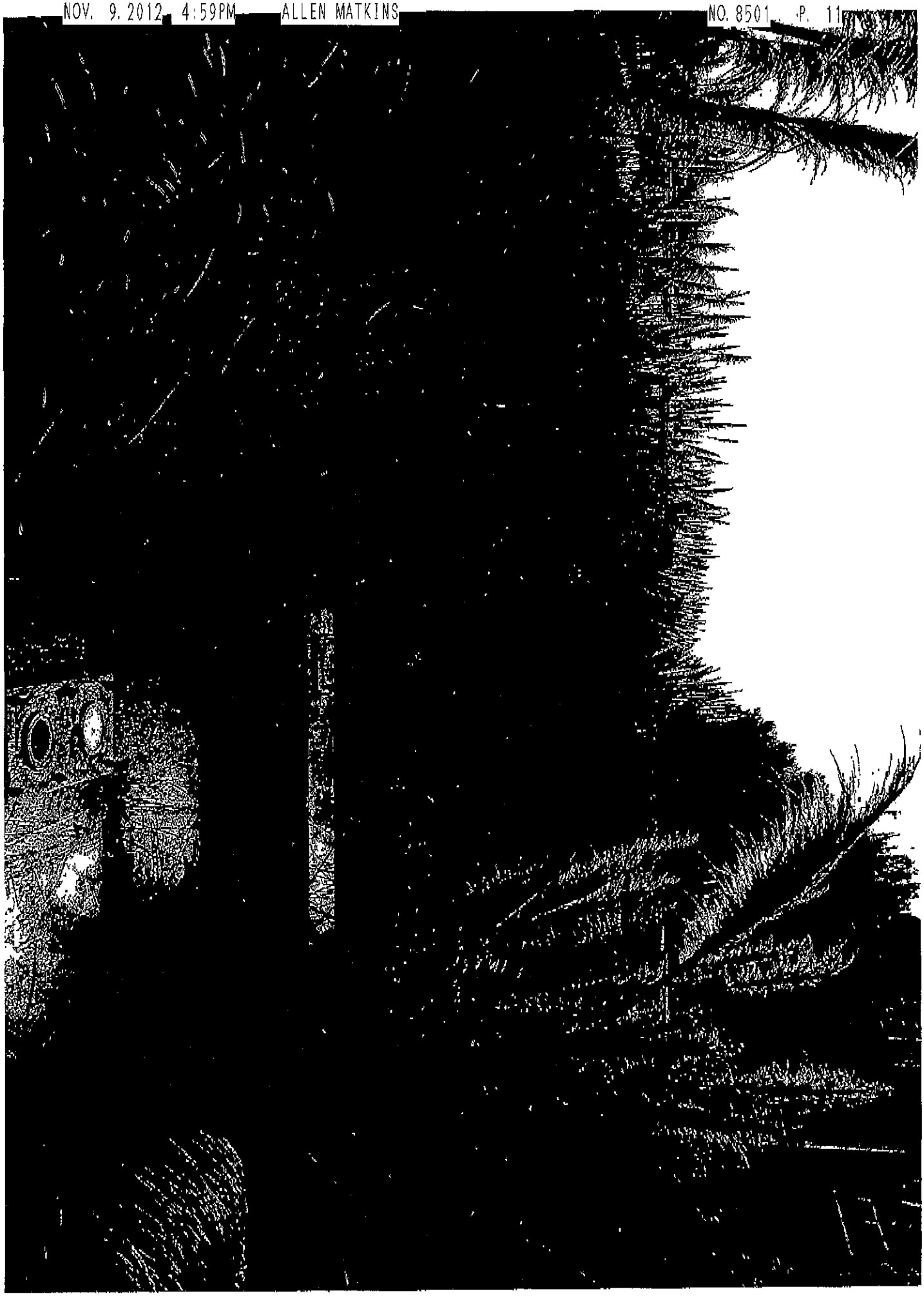


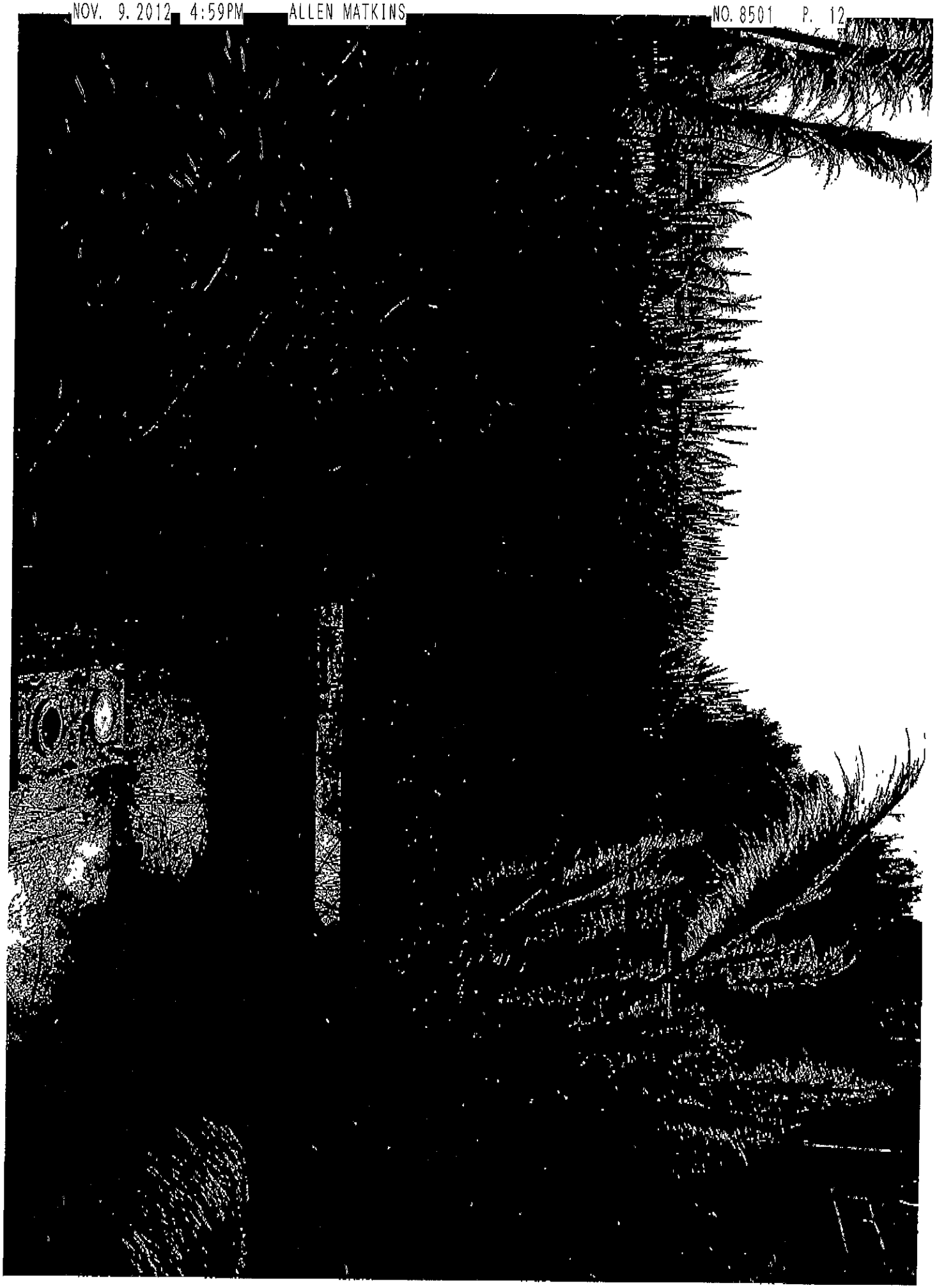


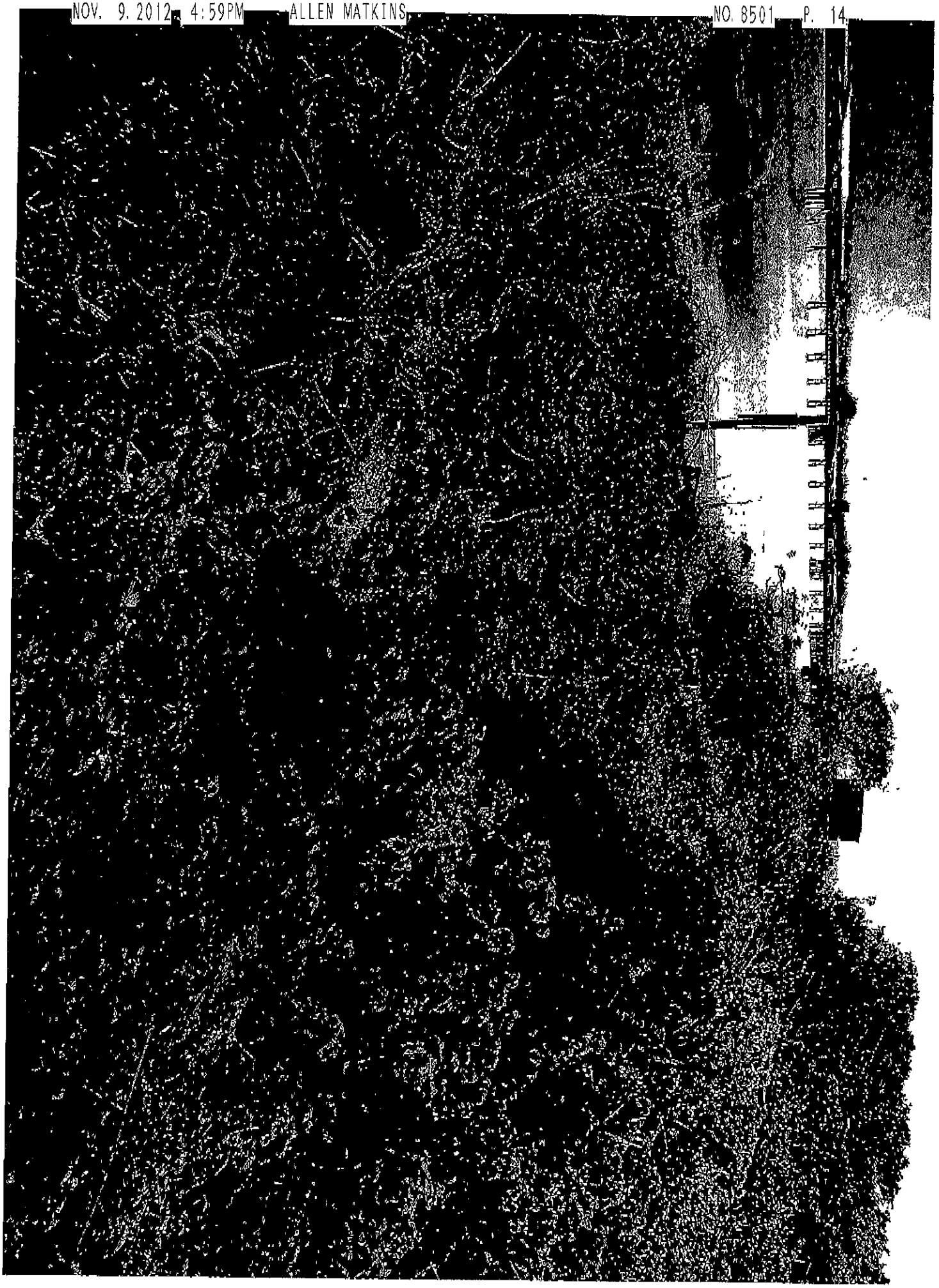


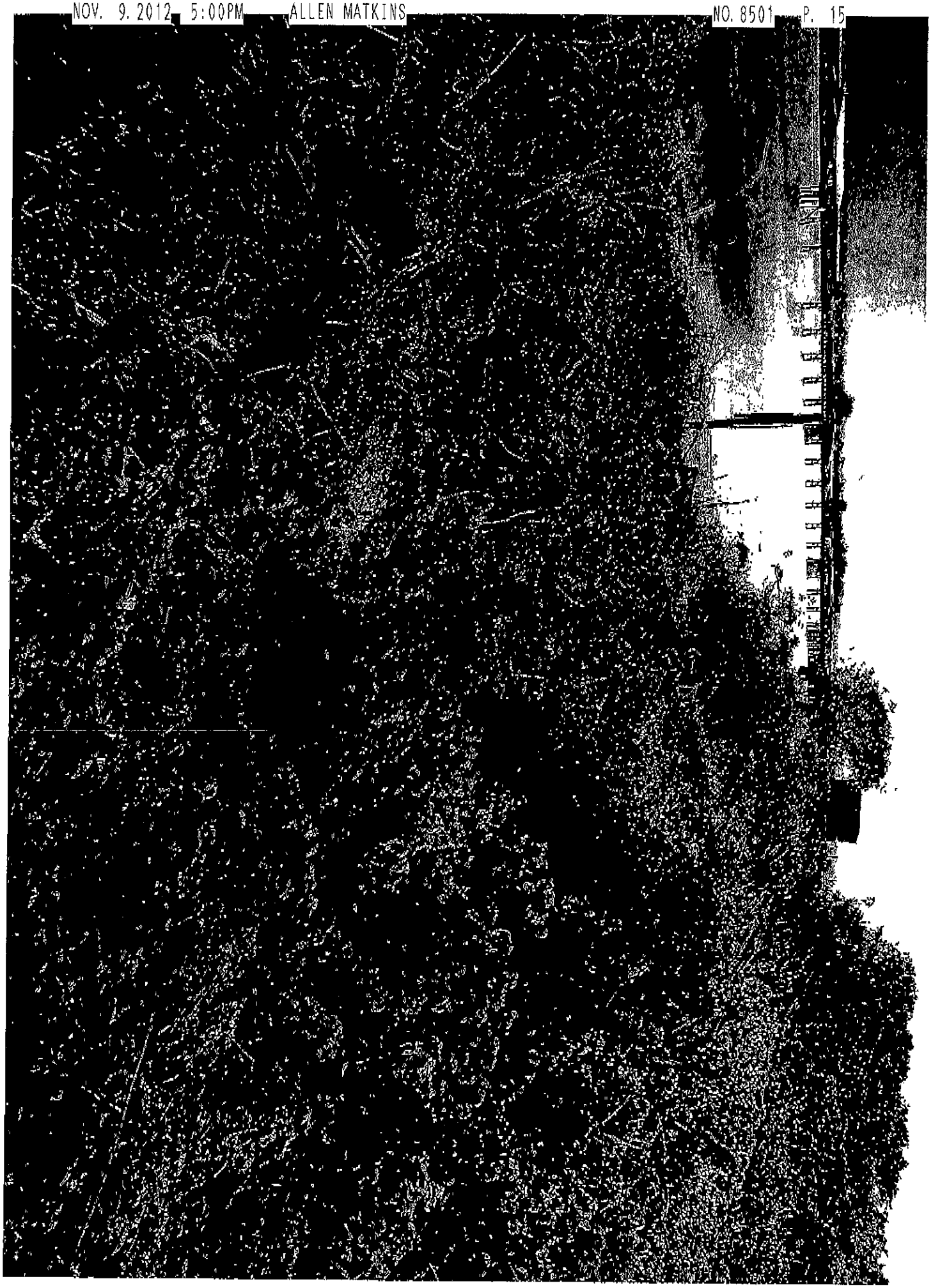


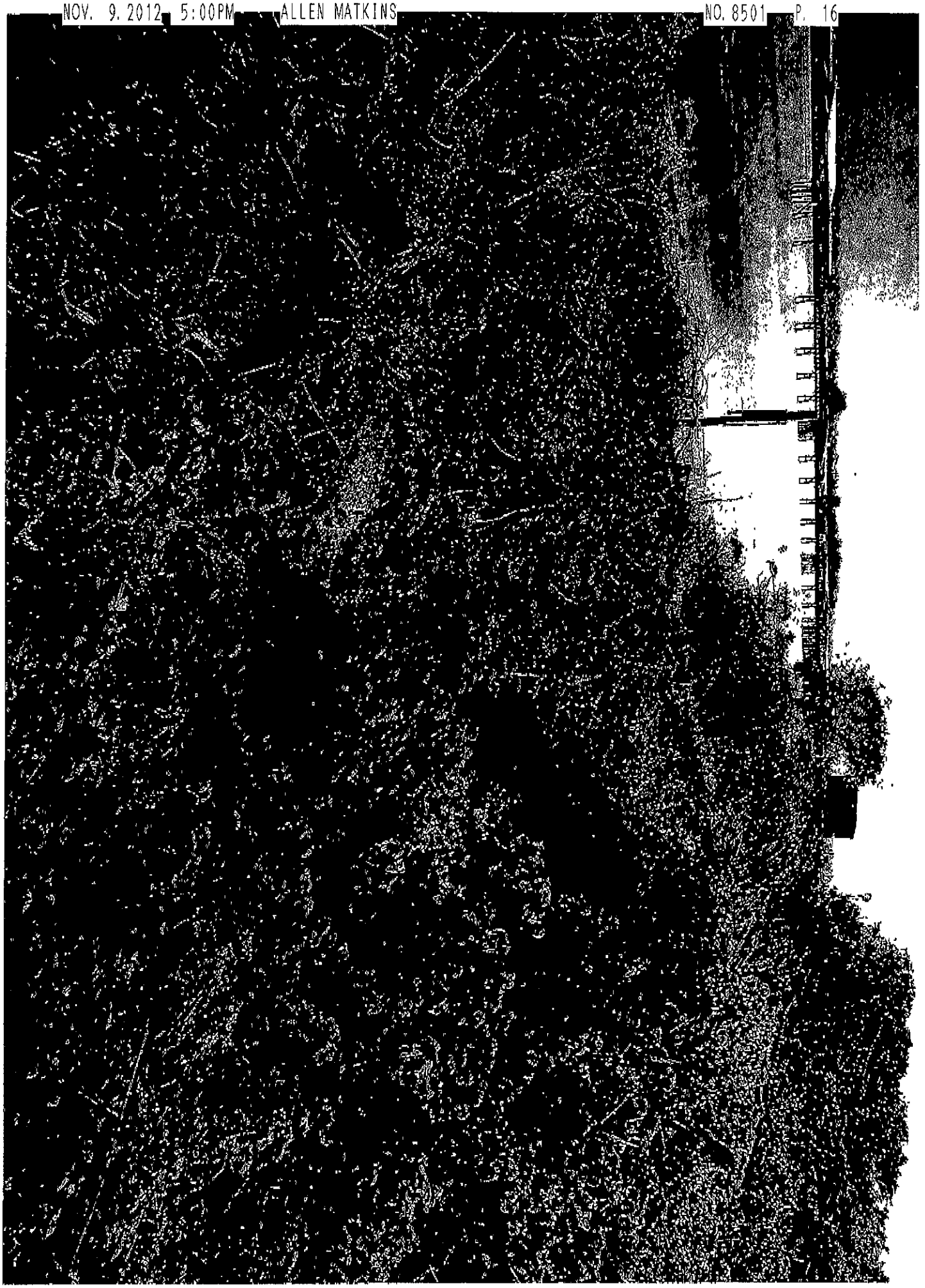












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W13a

Filed: 6/10/12
180th Day: 12/7/12
Staff: C. Teufel-SF
Staff Report: 10/24/12
Hearing Date: 11/1412

STAFF REPORT: REGULAR CALENDAR

Application No.:	**E-11-029**
Applicant:	**Taylor Mariculture LLC**
Agents:	Plauché and Stock LLP and Steelhead Law PLLC
Location:	Samoa Peninsula, Samoa, Humboldt County.
Project Description:	Install seed settling facility, shellfish nursery rafts, floating upwelling systems (FLUPSYs), and associated equipment on an existing pier and shipping berth, and construct and operate an onshore storage and seed washing facility.
Staff Recommendation:	Approval with conditions.

SUMMARY OF STAFF RECOMMENDATION

Taylor Mariculture, LLC. (Taylor) proposes to establish an aquaculture operation at an existing pier and berth facility owned by the Humboldt Bay Harbor, Recreation, and Conservation District and formerly associated with an upland pulp mill. The pier and berth facility is located north of the Eureka Municipal Airport near the town of Samoa on the west side of the entrance channel of Humboldt Bay.

The proposed operation would support shellfish seed cultivation operations – the process of taking free swimming oyster and clam larvae (spawned in a hatchery at a separate location) and

growing them to between four and twelve millimeters in size. After reaching this size, the shellfish are known as seed and would be sold to other commercial operations for further grow-out and harvest elsewhere. The proposed shellfish seed operation involves eight elements: (1) a seed setting facility; (2) nursery rafts; (3) floating upwelling systems (FLUPSYs); (4) pier upgrades; (5) a seed wash facility; (6) a wash water discharge system; (7) parking and storage; and (8) an access road.

The key Coastal Act issue of concern is the potential to adversely affect marine resources by altering benthic, water column, and surface water habitat characteristics and by providing a source for potential disturbance, injury, and predation to marine wildlife.

The Commission staff believes that with implementation of recommended **Special Conditions 1-6**, the project can be carried out consistent with the marine resource and water quality protection policies of the Coastal Act. **Special Condition 1** would establish a permit term limit consistent with the current lease term for the project site, giving the Commission the opportunity to re-assess the coastal resource impacts of the operation after it has been functioning for approximately 10 years. In addition, **Special Conditions 2-6** would further reduce potential marine resource impacts by: reducing the potential release of invasive species into Humboldt Bay during maintenance cleaning; requiring the installation of passive wildlife exclusion devices if colonization of the rafts by marine mammals or seabirds begins to occur; requiring the design of the wash water intake system to reflect current standards established to minimize the entrainment and impingement effects; and requiring that protective measures be carried out for nesting osprey that have been observed in close proximity to the project site.

Commission staff recommends that the Commission **APPROVE** coastal development permit amendment application E-11-029, as conditioned.

TABLE OF CONTENTS

APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

Motion:

I move that the Commission approve Coastal Development Permit E-11-029 subject to conditions set forth in the staff recommendation specified below.

Staff recommends a **YES** vote on the foregoing motion. Passage of this motion will result in approval of the permit amendment as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of Commissioners present.

Resolution:

The Commission hereby approves the Coastal Development Permit for the proposed project and adopts the findings set forth below on grounds that the development as amended and conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the amended development on the environment.

II. SPECIAL CONDITIONS

1. **Permit Term Limit.** The permit shall expire on July 31, 2022, which is the date on which the current Humboldt Bay Harbor, Recreation, and Conservation District Lease expires. If this lease is extended or a new lease is issued by the Humboldt Bay Harbor, Recreation, and Conservation District, Taylor may apply to the Commission for a permit amendment to extend the term of this permit.

2. **Maintenance Cleaning.** All maintenance cleaning operations of the raft structures, raft floats, racks, and well infrastructure (not including clam cultivation trays) shall be carried out onshore. All biofouling organisms and biological materials removed during these cleaning operations shall be collected and disposed of at an appropriate upland facility. No discharge of untreated wash water or biofouling materials into Humboldt Bay shall occur during maintenance cleaning operations.

3. **Marine Wildlife.** If any marine mammals or more than ten pelicans and/or cormorants at any one time are observed on one of Taylor's nursery rafts or FLUPSYs for more than two weeks, Taylor shall within 10 days notify the Executive Director and within 30 days of such notification to the Executive Director submit, for review and approval, a plan to install passive deterrent devices (such as exclusionary fencing or netting) to prevent future use of the rafts or FLUPSYs by marine mammals or seabirds. Taylor shall install the passive deterrent devices and maintain them as approved by the Executive Director.

4. **Intake System Design.** All intake systems shall be designed with a screened intake with mesh openings of no more than 3/32 inches and a maximum intake water velocity of 0.33 feet per second.

5. **Non-native Species Management.** To minimize the introduction of non-native species, Taylor shall: (1) use screens during washdown of seed and equipment to contain all clams regardless of size; (2) discard all culled shellfish in onshore trash containers; and (3) remove all Manila clam seed from the nursery raft and FLUPSY system prior to reaching 12mm shell size, at which size they are not sexually mature.

6. **Osprey Protection and Nest Removal Plan.**
PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, Taylor shall submit, for review and written approval of the Executive Director, a minimum of two (2) copies of an Osprey Protection and Nest Removal Plan, prepared by a qualified biologist, for ensuring that (1) the authorized construction and operation of the Berth Two facility avoid all active osprey nests on the site until chicks have fledged, and (2) all osprey nests located on site are appropriately removed following the end of the nesting season and prior to commencement of the authorized development so that the nests do not become reoccupied by birds in future nesting seasons, when light, noise, and other disturbance related to increased activities at the site could disturb future nesting birds. The plan shall, at a minimum, include the following:

    - Provisions for ensuring that commencement of the authorized project activities shall be delayed until a qualified biologist confirms that the osprey nesting season is complete and that human activities and disturbance in the vicinity of the active nest(s) will be restricted or minimized until a qualified biologist confirms that chicks have fledged;
    - Provisions for removing all inactive osprey nests on the site following completion of the osprey nesting season (as confirmed by the qualified biologist's survey results required above);
    - Provisions for installing nest-deterring perch guards or equivalent devices atop light poles and other areas at the project site where nests were located to discourage osprey from nesting on the site next year when project activities during the nesting season could cause a nest to fail (e.g., be abandoned in the middle of the nesting season); and
    - Provisions for submitting a pre-construction report detailing the results of the osprey nesting survey and nest removal and deterrence activities required above for the Executive Director's review and written approval prior to commencement of the authorized work. The report shall include a narrative description of the osprey nest survey dates, methods, and results, details on nest removal dates, including how it was determined that nests were inactive prior to their removal, and details on nest deterrent devices installed to discourage future nesting attempts on the site.

    Taylor shall undertake development in accordance with the approved final plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Commission approved amendment

to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

III. FINDINGS AND DECLARATIONS

A. *Project Description*

Taylor Mariculture LLC (Taylor) proposes to develop a new shellfish seed production operation on and around an existing industrial pier/shipping berth in Humboldt Bay (see Exhibit 1) that was formerly associated with a pulp mill located in an adjacent upland area. The operation would focus on two non-native shellfish species common to shellfish aquaculture, the Manila clam (*Tapes philippinarum*) and Pacific oyster (*Crassostrea gigas*). The project would be located on the Berth Two facility on the Samoa Peninsula, near the Eureka Municipal Airport and west of the entrance channel of Humboldt Bay. The pier, berth, and adjacent upland area is owned by the Humboldt Bay Harbor, Recreation and Conservation District (District) and was formerly used in support of wood pulp and paper mill operations. The District has issued a ten-year lease to Taylor for use of the pier and onshore land through July of 2022.

Shellfish seed production is the process whereby free-swimming shellfish larvae are made to settle out of the water onto hard substrate and grown into larger juvenile organisms that can then be provided to an aquaculture operation for further cultivation and harvest. Taylor proposes to obtain free-swimming oyster and clam larvae from an offsite hatchery facility and grow them to between four and twelve millimeters in size before collecting them and preparing them for sale and shipping to offsite commercial aquaculture facilities. The proposed Taylor seed production operation involves eight elements: (1) a seed setting facility; (2) nursery rafts; (3) floating upwelling systems (FLUPSYs); (4) pier upgrades; (5) a seed wash facility; (6) wash water discharge system; (7) parking and storage; and (8) an access road.

Seed Setting Facility

The purpose of the seed setting facility is to produce shellfish seed from free-swimming larvae imported from an offsite shellfish hatchery. Shellfish seed is considered to be set when free-swimming larvae, spawned in a hatchery, settle out of the water and attach themselves to a hard surface for further growth and development. Typically, this attachment surface is “spat” - small pieces of oyster shell approximately 0.2 to 0.3 millimeters in size.

Taylor proposes to convert an existing building to a seed setting facility (see Exhibit 2). Retrofit activities include installation of holding tanks, a water intake, filtration, and heating system and a water discharge system.

The roof and walls of the building would remain in place but Taylor would retrofit the interior by adding several holding tanks, piping, office equipment, and intake and discharge piping from the bay waters located under the structure. Piping, comprised of approximately eight inch diameter PVC, would be attached to existing pier pilings for support. The intake pump would have a maximum capacity of approximately 200 gallons per minute and would be used primarily from March through July.

Nursery Rafts and FLUPSYs
The nursery rafts and FLUPSYs would be placed in Humboldt Bay as a joined floating structure (approximately 44,000 square feet) connected to the existing pier by way of a 40-foot long gangway. These rafts would allow the shellfish seed to be submerged in the waters of Humboldt Bay during grow-out. Diagrams of these structures are provided in Exhibit 3.

Three nursery rafts, each 66-feet long by 50-feet wide, would be installed in Berth Two along the inside of the face of the dock opposite the FLUPSYs and held in place with mooring lines and chains attached to the pier and piling. The nursery rafts would receive seed from the seed setting facility and hold it until it grows enough to be transferred to the FLUPSYs for further growth. Each nursery raft would be designed with grated decking, a holding tank, upwelling tanks, and associated equipment such as intake and circulation pumps. The pumps would draw seawater from below the rafts through a screened intake pipe and feed it to the holding tank where it would be collected and passed to the upwelling tanks by way of a single pass gravity fed system.

Forty upwelling tanks would be included on each nursery raft and the small oyster and clam seed would be held within each tank in mesh trays. Once seed is set in the seed setting facility located on the pier, it would be transferred to mesh trays and relocated onto the upwelling and nursery rafts for further grow-out.

Taylor proposes to install a row of nine FLUPSY units adjacent to the nursery rafts. FLUPSYs are used to quickly grow shellfish seed to the size needed for sale offsite to shellfish aquaculture farms. A FLUPSY is an in-water floating structure designed to upwell nutrient rich water through upwelling bins to provide a consistent source of nutrients to growing shellfish. The FLUPSYs would be moored by chain and line to the existing pier and adjacent pilings and would be comprised of aluminum with plastic wrapped floats for floatation and a submerged trough with a paddle wheel or propeller (as shown in Exhibit 3). The trough would be surrounded by open wells containing upwelling bins with shellfish. The FLUPSY would operate by using the paddle wheel or propeller to move water out of the trough; in order for the trough to refill, water would need to pass through the upwelling bins containing shellfish seed. The bottom of the upwelling bins are a 1.2 to 1.8 mm mesh screen, which allows water to come up through the upwelling bin and exit the bin at the top. Each FLUPSY would be approximately 22 feet wide, 164 feet long and would extend to about 5 feet below the water surface. Each FLUPSY would hold approximately 60 upwelling bins.

Shellfish seed would be placed in the FLUPSYs from the nursery rafts when it is approximately 2 to 2.8 mm in size and removed when it reaches approximately 4 to 12 mm in size. After removal from the FLUPSYs the seed would be washed at the onshore facility and shipped dry in a refrigerated truck to various locations out of state for further grow-out.

Pier Upgrades
Taylor proposes also to install on the existing pier a 2,000-pound capacity cable-crane system to facilitate the loading and unloading of the nursery rafts and FLUPSYs and the transport of shellfish seed from the seed nursery area to the onshore seed wash system. This involves installing two elevated 20-foot high support poles on either end of the pier, approximately 270-

feet apart. The support poles would be added to the existing surface of the pier and reinforced without substantial modification to the pier or additional pilings or footings.

In addition, Taylor also proposes to install a 40 foot long by five foot wide walkway/gangway off of the existing pier to provide access to the proposed nursery rafts and FLUPSYs.

Seed Wash System
The seed wash system would be constructed onshore near the base of the pier and would allow the shellfish seed to be cleaned to the level necessary to allow for transport out of state. The proposed site is within a previously developed area that is currently paved with asphalt. Taylor proposes to install new concrete slabs to support the seed wash system. The slabs would require the removal of surface asphalt and the excavation of approximately 200 cubic yards of soil. The wash system would include a 5000 gallon mixing and holding tank for preparing a freshwater and hypochlorite wash solution as well as an area for holding the seed during washing and a 6,500 gallon concrete sump system that would be used to contain and recover the used wash solution prior to treatment and disposal. All of these facilities would be located on the new concrete slabs.

Wash Water Discharge/Disposal
Used wash solution is proposed to be recovered, neutralized, and discharged onshore through injection into a proposed 765 square foot leach-field to be located in an upland area currently covered in asphalt near the base of the Berth Two pier. Within this area, Taylor proposes to install to a depth of four feet a subsurface infiltration system consisting of a series of perforated pipes and open bottom storm water detention chambers situated within and over a bed of crushed gravel. The infiltration field would be a maximum of 765 square feet and would be sized based on anticipated soil filtration rates so that the neutralized wash water can be infiltrated into the ground within approximately 24 hours.

Parking, Storage and Access Bridge
The project also includes a new storage shed and parking area onshore near the seed wash system on a previously developed site that is currently covered with asphalt. While access to the project would be provided across an adjacent developed property by way of an existing road, because an existing 20 foot wide culvert separates these two properties, completion of this access route would require the installation of a pre-fabricated 80-foot long one-lane vehicle bridge across the culvert to the north of the Berth Two pier. Bridge installation requires several small footings in areas of existing asphalt.

B. Other Agency Approvals

Humboldt Bay Harbor, Recreation, and Conservation District
The Humboldt Bay Harbor, Recreation and Conservation District has leased the Berth Two pier and adjacent onshore property to Taylor. The Harbor District served as lead agency under the California Environmental Quality Act and on January 26, 2012 certified a Mitigated Negative Declaration (MND) for the proposed project.

U.S. Army Corps of Engineers
The U.S. Army Corps of Engineers (ACOE) has regulatory authority over the proposed project under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 1344) and Section 404 of the Clean Water Act. Section 10 of the Rivers and Harbors Act regulates structures or work in navigable waters of the United States. Section 404 of the Clean Water Act regulates fill or discharge of materials into waters and ocean waters.

The ACOE is considering authorizing the proposed project pursuant to Nationwide Permit 48 (for installation of aquaculture equipment). Pursuant to Section 307(c)(3)(A) of the Coastal Zone Management Act (CZMA), any applicant for a required federal permit to conduct an activity affecting any land or water use or natural resource in the coastal zone must obtain the Commission's concurrence in a certification to the permitting agency that the project will be conducted consistent with California's approved coastal management program. The subject coastal development permit (E-11-029) will serve as Commission review of the project under the CZMA.

California Department of Fish and Game
Taylor's aquaculture operations are required to be registered annually with the California Department of Fish and Game. Taylor has a valid registration for 2012. In addition, the California Department of Fish and Game reviewed and provided comments on the draft Mitigated Negative Declaration.

California Regional Water Quality Control Board
The North Coast Regional Water Quality Control Board (Water Board) determined that Taylor's proposed operations do not require a certification under Section 401 of the Clean Water Act (33 USC 1341). However, the Water Board has directed Taylor to submit an application for a waste discharge permit for the proposed onshore seed wash facility. The North Coast Regional Water Quality Control Board anticipates receiving this permit application in early 2013 and would need to complete its review prior to the Taylor's use of the onshore facility.

National Marine Fisheries Service
The National Marine Fisheries Service (NMFS) received a request from the ACOE to initiate informal consultation pursuant to Section 7(a)(2) of the Endangered Species Act and on essential fish habitat for species managed under the Pacific Coast Salmon, Pacific Coast Groundfish, and Coastal Pelagics Fishery Management Plans pursuant to Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act. By letter dated August 8, 2012, from NMFS to the ACOE, NMFS concurred with the ACOE's conclusion that the proposed project may affect, but is not likely to adversely affect, federally threatened coho salmon, Chinook salmon, steelhead, North American Green sturgeon, Pacific Eulachon; and coho salmon, Chinook salmon, steelhead, and North American Green sturgeon critical habitats and that the proposed project contains adequate measures to avoid, minimize, mitigate, or otherwise offset the adverse effects to Essential Fish Habitat.

C. Marine Resources and Water Quality

Section 30230 of the Coastal Act states:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Section 30231 of the Coastal Act states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

The proposed installation and operation of a 45,000 square foot floating shellfish cultivation structure, operation of a seed setting facility, and onshore shellfish seed washing facility has the potential to adversely affect marine resources, water quality, and the biological productivity of coastal waters in Humboldt Bay by potentially causing adverse impacts to benthic and water column habitat, longfin smelt, listed salmonids, marine birds, and marine mammals.

Benthic Habitat
Based on information available from nearby sites, the benthic habitat at the site is expected to be comprised of fine sands and silts that support a variety of invertebrate species including polychaete worms, mollusks, and crustaceans (Barnhart et al. 1992). No eelgrass or other submerged aquatic vegetation is present within the Berth Two site.

The presence of nursery rafts and FLUPSYs, comprising a total surface footprint of approximately 44,000 square feet, may adversely affect benthic habitat by restricting the amount of light that is able to penetrate the water column and reach the bay sediment below the rafts. Such shading could stunt the growth of submerged aquatic vegetation or benthic algae, alter benthic invertebrate community structure, and modify the presence and abundance of bottom fish in the affected area. However, water clarity in the project area is very limited and sunlight penetration through the water column is naturally restricted by the particulate matter and sediment typically in suspension. Water clarity samples taken in the summer and fall near the proposed project site have measured the maximum depth to which 1% of surface illumination penetrates at less than four feet on average (Barnhart et al. 1992, Lomelli 2011). Because the rafts would be placed in water depths of approximately 14 to 20 feet where light penetration to the bay bottom is already not expected to occur, shading from the rafts is not anticipated to result in any adverse effects on benthic habitats. In addition, the design of the proposed nursery rafts

includes areas of grating across portions of the surface of the rafts (see Exhibit 3), allowing some light penetration to occur through the structures and reducing the size of each raft's shade footprint.

Water Column Habitat

Overwater structures reduce light penetration through the water column, which can cause a variety of adverse impacts to marine organisms. In addition, these structures can provide substrate for invasive species, alter current flow and aggregate upper level predators, causing unnaturally high pressure on forage fishes. As discussed in detail below, this project has the potential to cause each of these adverse impacts.

Shading

The presence of large floating structures on the surface typically results in lower light transmittance to the water below. For photosynthetic organisms, including phytoplankton, this shading effect can limit growth rates, abundance, and diversity. Reduced size, diversity, and abundance of low trophic level phytoplankton species can have corresponding effects on the abundance and diversity of species farther up the food chain, including fish and invertebrates.

Overwater structures proposed as part of this project could cause some of these shading effects. The proposed location and design of the nursery rafts and FLUPSYs, however, would help to minimize the likelihood of such effects occurring. Specifically, the proposed location of the raft structures in the deep water off the shore of the Samoa Peninsula, an area of frequent tidal currents, would enhance water flow beneath the rafts and increase the frequent movement of phytoplankton from partially shaded to un-shaded adjacent waters. This constant movement is expected to reduce the potential for the rafts to adversely affect primary productivity. In addition, the nursery rafts and FLUPSYs would be built with metal grating and mesh bottom wells as a major component of their surface material. These surfaces would allow some sunlight to penetrate through the rafts into the water column below, although some shading would still occur below each raft. However, given the relatively small footprint of the shaded portion of each raft as well as the water depth, current flow, and natural turbidity of the bay water, installation of the proposed array of nursery rafts and FLUSPYs is not expected to adversely affect the productivity of Humboldt Bay by significantly reducing the amount of water column habitat available for photosynthetic plankton.

Non-native Species

Based on a February 28, 2002, report to the California Department of Fish and Game titled, *Non-Indigenous Marine Species of Humboldt Bay, California*, over 95 invasive marine species are present in the bay, including numerous species known to present significant economic and ecological risk to both Humboldt Bay and other marine areas along the west coast. Many of these species are know to be "fouling organisms," species of invertebrates and algae that are known to seek out and colonize artificial hard substrate in the marine environment. Maintenance activities for in-water structures and vessels that involve periodic removal of fouling organisms without proper collection and disposal protocols may result in increased dispersal and propagation opportunities for these species. Such opportunities for dispersion and spread pose a particular risk with some algal species and colonial species such as didemnum that may break

apart into many pieces when disturbed, each of which may be capable of surviving, growing, and reproducing on its own.

Each of the proposed nursery rafts would include 40 cultivation wells and each of the proposed FLUPSYs would include 60 upwelling bins that would extend below the rafts into the water column. These structures would be expected to attract fouling organisms over time and are proposed to be periodically removed and cleaned. These cleaning activities involve the use of a pressure washer or hose and are proposed to be carried out on the rafts themselves, with wash water and removed fouling organisms discharged into the bay. To address the potential risk that this activity would have with regard to the spread and dispersion of invasive marine species, the Commission is requiring Taylor in **Special Condition 2** to carry out the cleaning and pressure washing of the rafts and cultivation well infrastructure at an onshore facility and to collect and dispose of all removed biological material and organisms at an upland facility.

The purpose of the nursery rafts and FLUPSYs is to cultivate non-native shellfish species, Manila clam (*Tapes philippinarum*) and Pacific oyster (*Crassostrea gigas*). Among these species, the Manila clam is considered to be invasive. In its previous approval of an array of shellfish cultivation rafts for Coast Seafoods Company, CDP E-02-005, the Commission found: (1) a population of Manila clams has already been established in Humboldt Bay as a result of introductions in previous decades; and that (2) the bottom area in the vicinity of Coast Seafoods Company's clam seed nursery does not contain the kind of shell and hard material that would promote Manila clam growth. In addition, Coast committed to implement following three management measures to further minimize the potential for its clam nursery to contribute to a self-sustaining population of Manila clam in Humboldt Bay:

- make every effort to minimize further introduction of live clams into the bay through diligent management practices during grading and handling to prevent spillage.
- During washdown of seed and equipment, screens will be used to contain all clams regardless of size and any culls will be discarded in onshore trash containers.
- All clam seed will be removed from the clam raft system and shipped back to Washington for planting by Coast, or sold to other shellfish customers operating outside of Humboldt Bay prior to reaching 12mm shell size, at which size they are not sexually mature.

In its approval of CDP E-02-005 and CDP amendment E-02-005-A2 the Commission found that these management measures would minimize the potential for Coast's operations to further augment existing naturalized populations of Manila clam in Humboldt Bay by limiting the potential for accidental releases to occur and ensuring that all cultivated clams are removed prior to reaching the size and age necessary to begin reproducing. The Commission is requiring Taylor in **Special Condition 5** to implement these same measures.

The proposed placement of the nursery rafts and FLUPSYs would still increase the total population of non-native shellfish in Humboldt Bay by up to a hundred million individual organisms. The filter feeding behavior of this population of non-native shellfish has the potential to adversely affect native shellfish species, communities of native organisms that rely on the same food resources, and the overall biodiversity and productivity of Arcata Bay if they affect a large enough volume of water and if they significantly decrease the amount of food resources in

that water available for native species. For example, the invasion of the San Francisco Bay-Delta Estuary by the non-native clam *Corbula amurensis* has had an apparent effect on longfin smelt population abundance, presumably through competition and its negative effects on the upper Estuary's planktonic food web (Bay Institute et al 2007, Kimmerer et al 1994).

Based on an analysis carried out by Confluence Environmental Company in the Draft Biological Evaluation it produced for Taylor on this project, each day, the population of clams proposed to be cultivated on the clam rafts would filter 1.3% of the total tidal prism – the volume of water that leaves Arcata Bay at ebb tide each day – and less than 1% of the total volume of water in Arcata Bay at high tide. Although notable, the filtration of this volume of water does not appear overly large when considered in the context of the average tidal exchange of water in this portion of the bay. In Arcata Bay, 44% of the total volume of water is replaced each day and 99% of the total volume of water is replaced every seven days. Accordingly, a portion of the water filtered by the cultivated clams is expected to exit the bay each day and the remainder would mix thoroughly with new water entering the bay. The population of non-native clams and oysters proposed to be cultivated on the nursery rafts and FLUPSYs is therefore not expected to substantially reduce the amount of available phytoplankton in Arcata Bay and is not anticipated to adversely affect native clam species, communities of native filter feeding organisms, and the overall biodiversity and productivity of Arcata Bay.

A similar analysis was carried out in the Commission's review of Coast's permit amendment application for its clam raft expansion project (E-02-005-A2). This analysis suggests that Coast's cultivation of Manila clam results in the filtration of 3.5% of the tidal prism and 1.5% of the total volume of water in Arcata Bay at high tide. The total combined water filtration effect of these two projects would therefore be approximately 5% of the total tidal prism and less than 3% of the total high tide volume of water in Arcata Bay. While the same type of analysis of other existing aquaculture activities in Humboldt Bay, such as that associated with Coast's approximately 300 acre oyster culture operation and Taylor's clam cultivation operations, is not available, the Harbor District recently carried out a different type of analysis that suggests these existing operations cumulatively remove approximately 5% of the total phytoplankton production of Arcata Bay. Considered cumulatively with other existing activities, therefore, the proposed project is estimated to result in the filtration of approximately 5% of the tidal prism and over 5% of the total phytoplankton production of Arcata Bay. This cumulative filtration is not anticipated to adversely affect native clam species, communities of native filter feeding organisms, and the overall biodiversity and productivity of Arcata Bay.

Special Status Species

Three species of salmonids that inhabit Humboldt Bay and its tributaries are listed as threatened under the federal Endangered Species Act of 1973. Two of these species are also listed as threatened under the California Endangered Species Act. Coho salmon (*Oncorhynchus kisutch*) is federally and state listed for the Southern Oregon/Northern California Coasts Evolutionarily Significant Unit (ESU), Chinook salmon (*O. tshawytscha*) is federally and state listed for the California Coastal ESU, and steelhead (*O. mykiss*) is federally listed for the Northern California ESU. These salmon species are present in Humboldt Bay both as adults during their migration from the sea into spawning rivers in the fall and winter and as juveniles as they move downstream into the ocean in the spring and early summer. In addition, longfin smelt

(*Spirinchus thaleichthys*) is listed as a threatened species under the California Endangered Species Act. Longfin smelt generally spawn in freshwater and move downstream to estuarine conditions to grow. Although once among the most abundant fish species in Humboldt Bay, present in larval, juvenile, and adult life stages, longfin smelt were considered to be possibly extinct there by 1996 (Eldridge and Bryan 1972, U.S. Fish and Wildlife Service 1996). In recent years, however, longfin smelt have again been observed in Humboldt Bay and are thought to be present year-round (Pinnix et al 2005).

Artificial overwater and in-water structures such as docks and rafts can alter surface and mid-water habitat and may affect juvenile salmon (especially ocean-type Chinook and chum) directly and indirectly: (1) directly by disrupting their migratory behavior along shallow-water shoreline habitats and (2) indirectly by reducing carrying capacity because of reduced production of under-structure habitats and increased predation by other fish, birds, and, marine mammals (Simestad and Nightengale 1999).

Although different than typical overwater structures, such as piers and docks, the additional rafts result in approximately 44,000 square feet of new floating raft structures. However, since these raft structures would be located between a series of existing piers in the Berth Two area of the Samoa Peninsula, an area characterized by existing overwater structures, docks, and piers that are spread in low density along the shoreline, the additional rafts would not represent a substantial increase over the existing amount of structure currently located in this area. As such, the proposed rafts would not be expected to result in adverse impacts to listed fish species as a result of changes to water column habitat.

Marine Mammal and Seabird Use
The proposed rafts may be colonized by seabirds and marine mammals for use as resting areas.

Such use may result in harm, harassment, or injury to this marine wildlife. Such effects on marine wildlife may be unintentional consequences of these animals using the rafts (entanglement or injury on the structures), attempting to prey on cultured shellfish on the rafts, or necessary deterrence activities that may be carried out in order to prevent property loss or damage. The injury, disturbance, or mortality to marine wildlife species that may result from their colonization of the proposed nursery rafts and FLUPSYs could result in adverse impacts to marine biological resources.

In addition to these direct effects, colonization of the proposed clam rafts by marine mammals or seabirds (both of which may prey on special status fish species such as longfin smelt and salmon that are known to be present in the project area) may have adverse indirect effects by augmenting the local abundance of predators and thereby increasing salmon and smelt predation. Longfin smelt, in particular, are known to be eaten by a variety of predatory fishes, birds and marine mammals and are considered to be a major prey of harbor seals (*Phoca vitulina*) in the Columbia River (Emmett et al. 1991). In addition, numerous studies throughout North America and Europe have demonstrated that avian predators such as cormorants and pelicans can consume large numbers of juvenile salmonids when appropriate conditions occur. In recent years, the Sand Islands in Arcata Bay, located only several miles north of the project site, have been found to support the largest nesting colonies of double-crested cormorants in California (Capitolo et al 2004). The presence of these colonies near the project area and the propensity of this species to

roost on man-made overwater structures suggest that colonization or development of roosts on new structures could occur, potentially increasing the amount of avian predation on juvenile salmon and longfin smelt in the project area. To a lesser extent, another piscivorous seabird species known to establish roosts on man-made overwater structures, the brown pelican, also may increase predation on longfin smelt and juvenile salmon in the project area if it is also able to colonize the proposed rafts.

Current use of the existing Berth Two pier structures by pelicans, cormorants, herons, loons, and seagulls appears to be limited. No marine mammals have been observed to haul out in this area. However, several miles north of the project site, both Coast and Taylor operate several arrays of shellfish cultivation rafts that are known to support populations of roosting seabirds, including brown pelicans and cormorants.

To address the potential adverse impacts associated with the direct and indirect effects of marine wildlife colonization of the rafts, the Commission is requiring Taylor in **Special Condition 3** to report to the Executive Director within ten days if marine mammals, cormorants, or pelicans begin establishing a haul-out or roost on its nursery rafts and FLUPSYs for more than two weeks and within 30 days submit for Executive Director review and approval a plan for the installation of passive marine mammal and/or seabird exclusion devices on the rafts. The Commission believes that implementation of Special Condition 3 will help to limit the potential for the project to increase predation on longfin smelt and juvenile salmon and reduce potential injury or disturbance of marine wildlife.

Seawater Intakes

The removal of seawater through intake structures is known to result in the impingement and entrainment of marine life. The type and quantity of marine life that may be adversely affected in this way is related to the size and velocity of the intake structures. Larger, high-velocity structures can cause the impingement and entrainment of larger organisms that can include adult fish while smaller low-velocity structures can typically only impinge and entrain smaller larval and juvenile organisms. While impingement (capture of fish and marine organisms against an intake screen due to suction) can often result in the injury or mortality of the affected organism, adverse effects of entrainment (capture of fish and marine organisms in the intake stream) vary based on the type of intake system (configuration of pipes, pressure changes, temperatures) and ultimate use of the entrained water.

As part of its proposed operations, Taylor would carry out a variety of activities that would require the use of seawater extracted from Humboldt Bay. These activities include (1) operation of the seed setting facility – which would require approximately 43 million gallons of seawater intake per year; (2) operation of the nursery rafts; (3) operation of the FLUPSYs; and (4) maintenance cleaning of the rafts and equipment. Taylor proposes to use Arcata Bay as a water source for these activities.

Seawater use associated with operation of the nursery rafts and FLUPSYs would be limited to the water drawn-in to upwelling tanks and the paddle-wheel trough and discharged back into the bay and would therefore not include permanent removal, heating, or the pressure changes and mechanical stress that comes with movement through a long series of pipes. Because removal, heating, and mechanical stress are the primary causes of mortality for entrained organisms, the

type of proposed water use associated with operation of the nursery rafts and FLUPSYs would not be expected to result in entrainment impacts to the larval and planktonic organisms within the water.

Seawater use associated with the seed setting operation and maintenance cleaning of the rafts and in-water equipment would include mechanical stress and heating, however, and would be likely to cause mortality to a portion of the larval and planktonic organisms in the water extracted from the bay for these uses. Total annual water use for the seed setting facility would be approximately 48 million gallons and total annual water use associated with the maintenance cleaning operations, based on the water use of a similar seed cultivation operation by Coast, would be approximately 10 million gallons. Combined seawater use would be close to 60 million gallons. This amount of annual water use, the limited amount of heating that the water would undergo (heated to 74-76 degrees Fahrenheit) and the fact that both the seed setting facility water and wash water would be discharged into the bay after use – allowing some larval and planktonic organisms to return to the bay - would not be expected to result in significant adverse entrainment impacts.

In response to concerns raised by staff of the California Department of Fish and Game (DFG) and National Marine Fisheries Service (NMFS) regarding impingement of listed species such as longfin smelt and juvenile salmon, and due to DFG and NMFS intake system standards, Taylor has committed in its project description to use intakes designed according to National Marine Fisheries Service and DFG requirements as protective of fish. In other words, Taylor will limit intake velocities so that they will not exceed 0.33 feet per second and will use 3/32 inch mesh screening on its intake structures. The Commission has previously found these standards to reduce the potential impingement and entrainment of juvenile and adult fish because an intake velocity of 0.33 feet per second is not likely to exceed a fish's swimming ability and most juvenile and adult fish exceed 3/32 inch in size. **Special Condition 4** memorializes Taylor's commitment and requires that the seawater intake velocity for Taylor's operations and maintenance and cleaning activities not exceed 0.33 feet per second and that the screen openings for the intake point screen remain no larger than 3/32 inch.

Water Quality

Because some of the shellfish seed is proposed to be transported to Washington for grow-out, prior to shipment, the shellfish seed is proposed to be soaked in a 60 ppm freshwater hypochlorite solution as required by the Washington Department of Fish and Wildlife. Harvested shellfish seed would be placed into totes; and, as needed, transported to the seed washing system from the pier using a small forklift. The washing facility can accommodate a maximum of 20 totes. Each tote will be filled with the hypochlorite solution from the mixing and holding tank, and soaked for at least an hour. After soaking, the totes will be drained into the sump system; and the used wash water will be returned to the mixing tank where the amount of residual chlorine present will be measured. If the water has four parts-per-million of chlorine or less (the drinking water standard), it would be infiltrated into the ground without further treatment. If the concentration of chlorine is greater, the wash water would be neutralized by adding sodium thiosulfate to the water while it is in the mixing tank prior to disposal. Sodium thiosulfate neutralizes chlorine and would be added until the concentration of chlorine is at or below four parts-per-million.

Because the proposed seed wash operations would be carried out within a concrete pad area with a catchment system and sump, any spill of chlorinated wash solution would be expected to be contained within this area. Additionally, as described above, the wash water would be tested and neutralized prior to discharge into the infiltration area when it exceeds drinking water standards. This would ensure that water discharged into the groundwater water table would not be contaminated with chlorine. These two proposed measures are expected to adequately protect the quality of coastal waters.

Conclusion
Although the Commission finds that the proposed project has the potential to adversely impact marine resources and the biological productivity of coastal waters, with implementation of **Special Condition Nos. 2** through **5**, the project is expected to be carried out in a manner in which marine resources are maintained, species of special biological significance are given special protection, the biological productivity of coastal waters is sustained, and healthy populations of all species of marine organisms will be maintained. In addition, the proposed project, as conditioned, is expected to maintain the biological productivity of coastal waters appropriate to maintain optimum populations of marine organisms. The Commission therefore finds that the proposed project, as conditioned, is consistent with the marine resource sections (Sections 30230 and 30231) of the Coastal Act.

D. Environmentally Sensitive Habitat Area

Coastal Act Section 30240 states that:

> *(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
>
> *(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

In addition, Coastal Act Section 30107.5 defines “Environmentally sensitive area" as follows:

> *"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.*

Osprey Nests
Due to the status of osprey (*Pandion haliaetus*) as a Species of Special Concern in California, occupied osprey nests may be considered to be environmentally sensitive habitat areas. The Commission staff has observed osprey nesting in close proximity to the base of the Berth Two pier and the proposed location of the onshore seed washing facility (June 2012 site visit). Although osprey observed in the area were behaving in a manner that suggested one or more of the nests may have been occupied, it was unclear at the time which of the nests may not have

been occupied. It was also unclear how long the nests have been present on the site or when the potentially inactive nests last were occupied by nesting birds. It is possible that all three nests belong to the same breeding pair, as osprey mate for life, and a pair may rotate the use of different nests in close proximity to one another over different breeding years to avoid parasites or disease-causing organisms that may infect a nest.

Osprey is a large raptor species that historically nested throughout much of California (as well as other parts of the country and world). Due to human persecution, habitat alteration, and the use of DDT following World War II, the osprey population in the state declined throughout much of its historic range. Today the osprey breeding range in California is restricted to the northern parts of the state, and the species is listed by the Department of Fish and Game as a Species of Special Concern. Ospreys primarily prey on fish, and the species is sometimes referred to the fish eagle or sea hawk. The birds generally nest in forested habitats near large water bodies, in tall, stable snags or in live trees with flat or broken tops that will support large stick nests. Sometimes ospreys build nests on tall cliffs or on human-made structures, as is the case at the subject site. Adult birds often show a high degree of nest fidelity, meaning that they return to a particular nesting site each year. Ospreys are particularly sensitive to disturbance during the courtship and nesting seasons (typically March through September), and disturbance during this time may result in nest abandonment.

In July of 2011, the Coastal Commission approved a CDP for a project located on an adjacent parcel to the north of the project site (California Redwood Company, CDP No. 1-10-033), where osprey nests were also found in close proximity to areas in which construction and demolition activities had been proposed. The Commission approved that project subject to a special condition requiring the applicant to: (1) postpone construction until after the nesting season; (2) remove unoccupied nests on the site following completion of the nesting season and prior to commencement of the authorized work. The latter requirement was to ensure that the nests would be unavailable for nesting the following year when light, noise, and other disturbance related to that project would be disruptive to nesting birds, potentially leading to nest abandonment. The Commission further required installing nest-deterring structures (such as triangular perch guards) on the light poles and steel tower to deter future nesting. These requirements were developed in coordination with recommendations made by staff from the Eureka office of the Department of Fish and Game.

In the findings supporting that permit, the Commission's ecologist (Dr. John Dixon) noted his agreement with the DFG recommendations for avoidance and protection of sensitive osprey nesting habitat, and expressed his belief that in that particular case, the unoccupied osprey nests at the subject site did not represent environmentally sensitive habitat in their unoccupied state. Therefore, the removal of the unoccupied nests after the nesting season was not found to result in ESHA disturbance. Dr. Dixon has reviewed the current Berth Two project and supports a similar finding with regard to the osprey nests located in this area.

Due to the presence of osprey nests in close proximity to the proposed Berth Two project site the Commission is also requiring in **Special Condition 6** similar osprey nesting habitat avoidance measures. **Special Condition 6** requires, prior to permit issuance, submittal of an Osprey Protection and Nest Removal Plan for the Executive Director's review and approval. The plan must be prepared by a qualified biologist and must, at a minimum, include provisions for (1)

ensuring that commencement of the authorized project activities be delayed until a qualified biologist has confirmed that the osprey nesting season is complete and that human activities and disturbance in the vicinity of the active nest(s) will be restricted or minimized until a qualified biologist confirms that chicks have fledged; (2) removing all inactive osprey nests on the site following completion of the osprey nesting season (as confirmed by the qualified biologist's survey results required above); (3) installing nest-deterring perch guards or equivalent devices atop light poles and the steel tower where nests were located to discourage osprey from nesting on the site next year when project activities during the nesting season could cause a nest to fail (e.g., be abandoned in the middle of the nesting season); and (4) submitting a pre-construction report detailing the results of the osprey nesting survey and nest removal and deterrence activities required above for the Executive Director's review and written approval prior to commencement of the authorized work. The report shall include a narrative description of the osprey nest survey dates, methods, and results, details on nest removal dates, including how it was determined that nests were inactive prior to their removal, and details on nest deterrent devices installed to discourage future nesting attempts on the site. With implementation of this condition, the Commission believes that disturbance of occupied osprey nests would not occur and that potentially adverse impacts to ESHA would be avoided.

E. California Environmental Quality Act

On January 26, 2012, the Humboldt Bay Harbor, Recreation, and Conservation District certified a Mitigated Negative Declaration for Taylor's development of the Berth Two facility into a shellfish seed setting and nursery operation. In addition, Section 13096 of the Commission's administrative regulations requires Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act ("CEQA"). Section 21080.5(d)(2)(A) of CEQA prohibits approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant impacts that the activity may have on the environment. The project as conditioned herein incorporates measures necessary to avoid any significant environmental effects under the Coastal Act, and there are no less environmentally damaging feasible alternatives or mitigation measures. Therefore, the proposed project is consistent with CEQA.

Appendix A: Substantive File Documents

Coastal Development Permits and Application Materials:

Staff Report for Coastal Development Permit No. 1-10-33
Application and Application File for Coastal Development Permit No. E-11-029

Environmental Documents:
Taylor Mariculture LLC, *Draft Mitigated Negative Declaration and Initial Study for Taylor Mariculture Berth 2 Facility*, November 2011.

Confluence Environmental Company, *Mariculture Berth 2 Facility – Biological Evaluation*, May 8, 2012.

California Department of Fish and Game, Letter to Humboldt Bay Harbor, Recreation and Conservation District re: Draft Negative Declaration and Initial Study for Taylor Mariculture Berth 2 Facility Project, January 10, 2012.

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Exhibit 1 – Project Location

FIGURE 1
Site Vicinity

Berth 2 Mariculture Facility
Eureka, California
for Taylor Mariculture, LLC

EXHIBIT 1

Project Location

Exhibit 1 – Project Location

EXHIBIT 1

Project Location

Exhibit 2 – Pier Building Retrofit Design

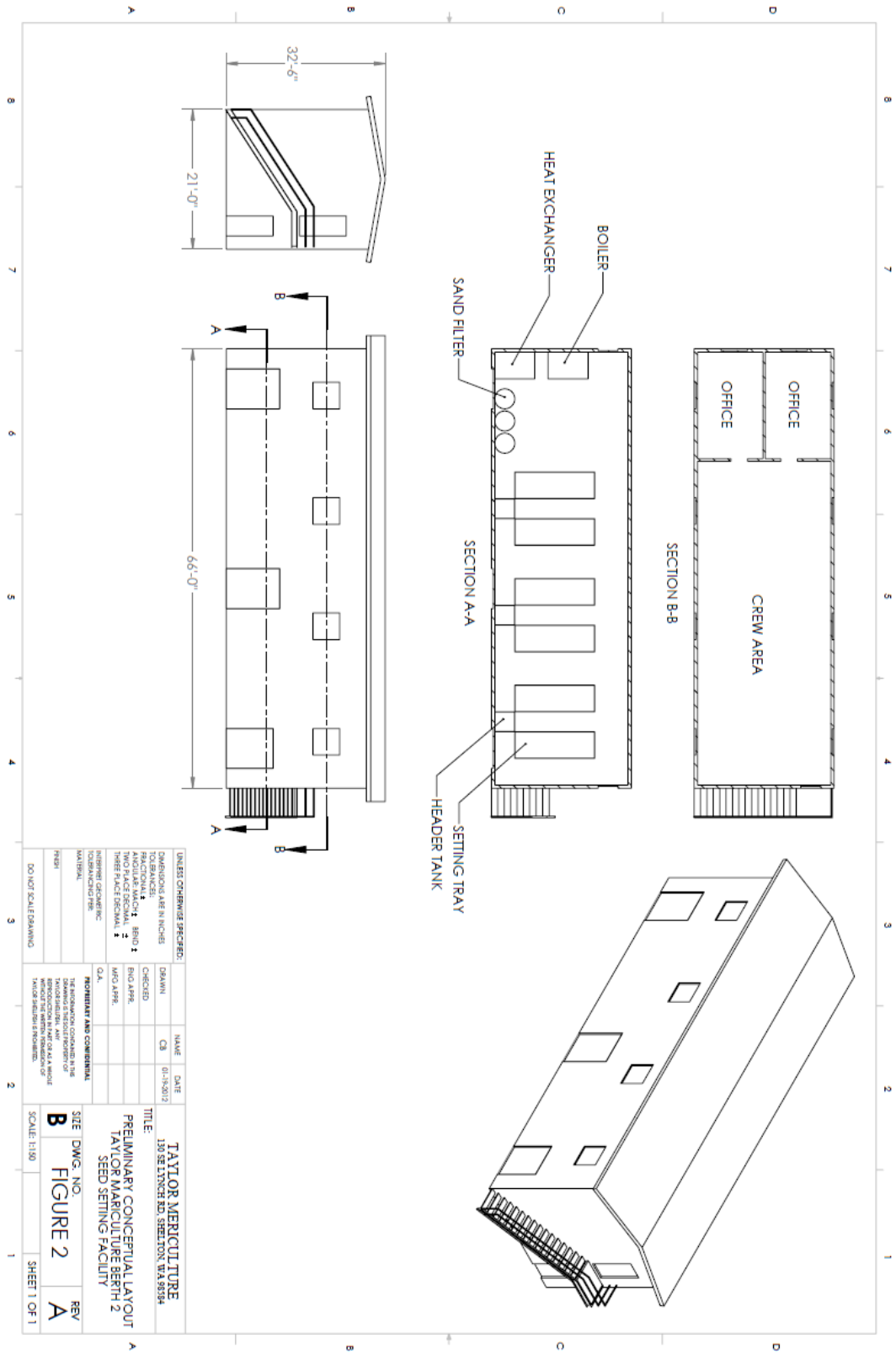


EXHIBIT 2
Pier Building Retrofit Design

Exhibit 3 – Nursery Rafts and FLUPSYs

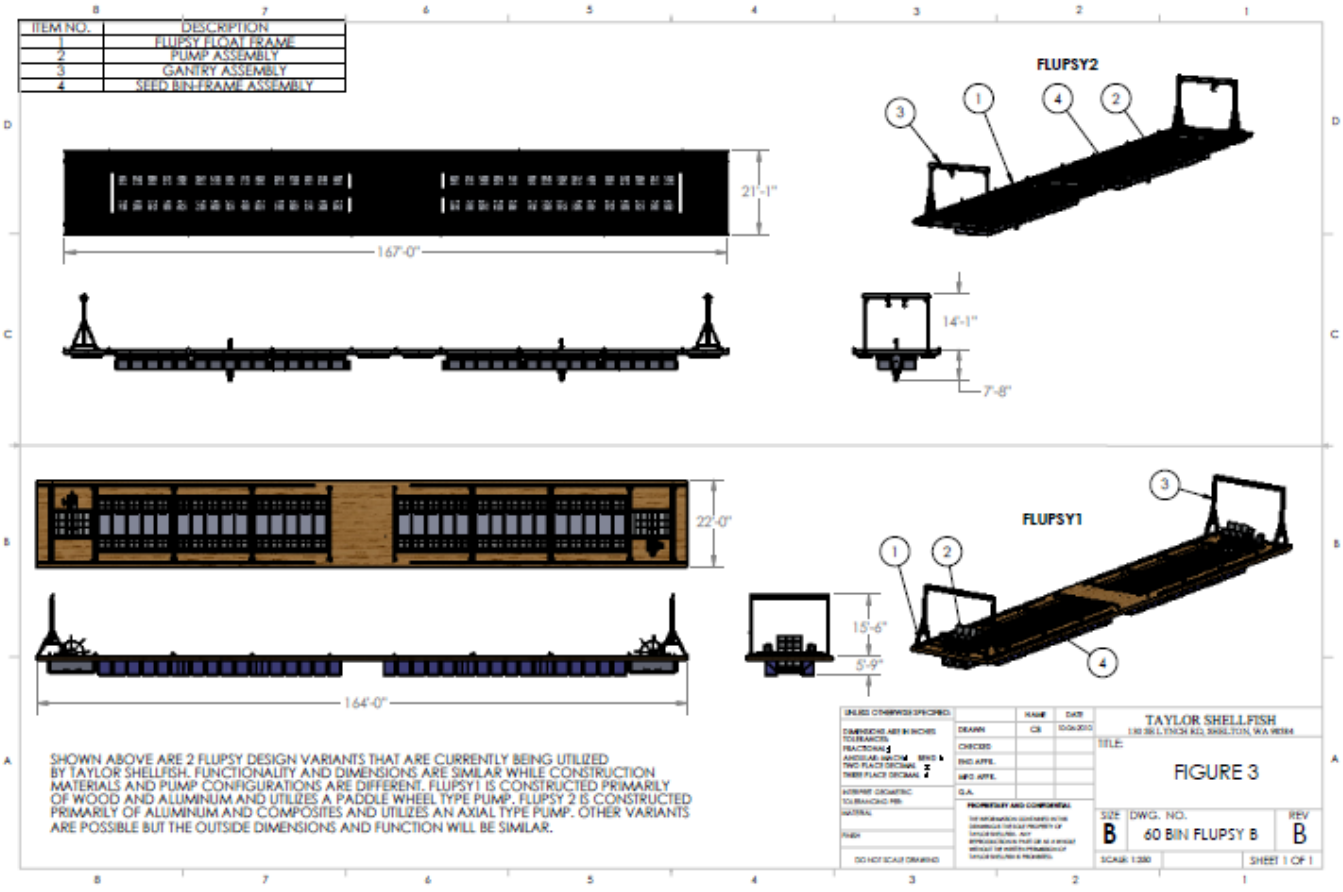
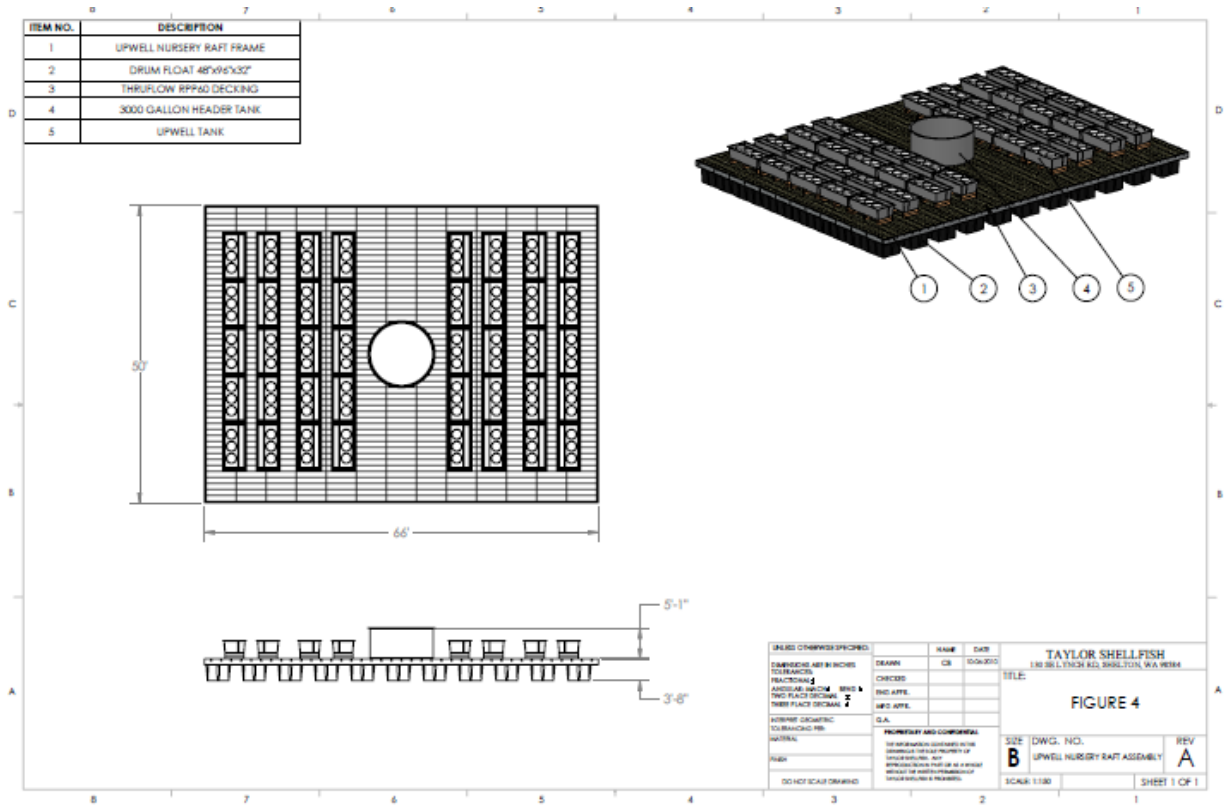


EXHIBIT 3
Nursery Rafts and FLUPSYs

Exhibit 3 – Nursery Rafts and FLUPSYs



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