



Citizens Committee to Complete the Refuge

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Sent via electronic email only to schuyler.olsson@bcdcc.ca.gov

Bay Conservation and Development Commission
Attn: Schuyler Olsson, Coastal Program Analyst
375 Beal Street, Suite 510
San Francisco, California 94105
Email: schuyler.olsson@bcdcc.ca.gov

8 June 2021

Re: Notice of Notice of Intent to Finalize an Environmental Assessment for the Cargill, Incorporated Solar Salt System Maintenance and Operations Activities Project

Dear Mr. Olsson,

These comments are submitted on behalf of the Citizens Committee to Complete the Refuge in response to the Notice of Intent (NOI) to Finalize the Draft Environmental Assessment (DEA) for the Cargill, Incorporated Solar Salt System Maintenance and Operations Activities Project (Cargill salt pond O & M project). Thank you for providing additional time to review additional documents that were received May 28th.

Based upon our review of the EA and on the permitted activities and permit conditions in BCDC Permit No. 4-23 we have the following comments:

The DEA states that the most recent permit was issued in 1995 and that a series of extensions and amendments have been issued since that time. We urge the Bay Conservation and Development Commission (BCDC) to establish a firm lifespan of no more than 10-years for the forthcoming Salt Pond O & M permit authorization. In this era of rising sea levels, it would be prudent to reassess the impacts of actions along the edges of the Bay much more frequently than has previously occurred.

DEA p. 2-20 – “Over time, Cargill intends to make all outboard and most inboard berms drivable.”

We applaud the movement towards the use of land-based equipment instead of dredging through tidal sloughs and cutting through tidal wetlands to access dredge locks. We commend Cargill for proposing O & M activities that can be conducted from land or from the interior of the salt ponds. However, we are concerned that the DEA has not adequately assessed the impacts of converting “all outboard and most inboard berms drivable.” Does BCDC intend to cover these activities under the Salt Pond Operations and Maintenance Permit? If these activities are intended to be covered under the proposed Salt Pond O & M permit, and if making berms “drivable” includes increasing the width of existing berms - hence increasing the footprint of the berms

within the salt ponds, or bridging gaps, or culverting gaps in interior berms - then these are regulated activities that could have significant impacts to wildlife that should be identified, analyzed and mitigated in the DEA.

The gaps in internal berms have been documented to provide nesting and roosting birds protection from land-based predators. The September 2016 assessment of best management practices conducted by WRA, Inc.¹ noted, “The company also continues to create 25-foot gaps in a number of levees to improve water flow. The dual-purpose gaps also create new islands for birds that are isolated from predators.” [emphasis added]

Siegel and Bacchand² noted, “**Lowering the Interior Levee between Ponds 1 and 2** - Lowering this internal levee is optional but desirable and is included in both alternatives. The lowered levee creates upland ecotone as refuge for tidal marsh species and the new gaps reduce predator access.” [emphasis added]

And the “Draft Environmental Impact Statement/Report, Phase 2, Eden Landing Ecological Reserve” similarly noted, “**Predation. Levee breaches may serve to isolate habitat from upland predators. Connecting levees through bridges and trails for public access may limit this value.**” [emphasis added]

In addition, conversion of these interior berms to “drivable” berms could result in the loss of nesting and roosting habitat for listed and sensitive species due to increases in human disturbance and vehicular traffic. Has Cargill identified which internal berm gaps might be retained? Has there been any coordination with the U.S. Fish and Wildlife Service (USFWS) to determine if there are berm gaps that should not be bridged or culverted to protect listed or rare nesting/roosting birds?

Potential increased vulnerability to land-based predators and the potential loss of nesting habitat resulting from making all outboard and most inboard berms drivable were not identified or analyzed within the EA nor was mitigation for these impacts proposed. This should be rectified before the DEA is finalized.

DEA p. 2-20 – Minor fill and excavation – The project description describes “minor fill and excavation” activities as:

- “Minor excavation to provide access to repair and replace facilities
- Other minor fill or excavation in the Bay, in managed wetlands and in salt ponds for purposes consistent with berm maintenance, access to salt ponds, use of locks, salt making, the placement of pipes, siphons, power, tidal control structures, and the prevention of erosion and repairs related to storm damage”

Are there any limitations on the total acreage or cubic yards of “minor fill” or “minor excavation”

activities that will be permitted per year? The required annual reports of completed work should cover a long enough time span to provide reasonable yearly estimates of minor fill and excavation required for O & M activities, and therefore sufficient information to provide limitations on the amount of minor fill and excavation that can occur per year.

¹ WRA, Inc. 2016. *Working in a Wildlife Environment - An Assessment of the Effectiveness of Cargill Salt's Best Management Practices 2010 - 2015*. August.

² Siegel, S.W. and P.A.M. Bachand. 2002. Feasibility Analysis of South Bay Salt Pond Restoration, San Francisco Estuary, California. Wetlands and Water Resources, San Rafael, California. 228 pp.

Please clarify and provide examples of “minor fill” activities covered under “salt making.” All of the other examples provided in the statement above are associated with defined activities. “Salt making” is so broad a term that it would encompass all the examples included in the description above. What other activities would be covered under the heading “salt making” that would require “minor fills?”

Figure 2-3 Salt Pond Berm: Typical Cross Section –

On the inboard side of the levee, looking at the area between the “existing berm 2:1” and the inboard toe of the “maintained berm 3:1” that occurs below the pond surface elevation, is this new fill within the salt ponds? Or is the “maintained berm 3:1” what Cargill is claiming to be the baseline width of the levee?

DEA p. 2-30 – Riprap – The description of quantities of material and riprap notes:

“Nonetheless, it may be possible that additional work not shown in the Work Plan would be required in specific areas. If this additional work exceeds the area delineated in the Work Plan by 10,000 square feet or more, then a revised Work Plan would be submitted to the pertinent regulatory agencies, and any necessary regulatory approvals would be obtained prior to commencing the work as required by the applicable permits.”

Does the scenario above refer to the total amount of riprap required over the entirety of the Salt Pond O & M area? Or is the potential exceedance for a specific location? If the latter, then this threshold seems very high for riprap on outboard sides of the levees. In reviewing Table 2-7 “Summary of Volume and Area of Work Conducted, 2008-2019,” none of the riprap repairs exceeded 500 lf. 10,000 square feet of riprap, if assuming a width of 20 lf, would be equal to the largest linear footage of outboard levee riprap repair. Inboard riprap repairs were much longer in length than outboard repairs. If the 10,000 sq ft exceedance threshold refers to individual riprap repair locations, then that number should be much lower for outboard levee riprap repairs, perhaps by at least half the number proposed.

Under the discussion of measures to control “non-native animals and inappropriate populations of native animals that threaten species covered in this recovery plan,” the Tidal Marsh Ecosystem Recovery Plan³ notes:

“...Threats from other mammalian (e.g., Norway rats, cats, skunks, and raccoons) and invertebrate predators (e.g., non-native thistle weevils that feed upon seeds of *Cirsium hydrophilum* var. *hydrophilum*) should be monitored and, if necessary, control measures taken. Control measures may include a number of actions including removal of non-native predators, removal of predator perches, minimization of riprap slope protection, removal of trash from marsh access points, etc.” [emphasis added]

³ U.S. Fish and Wildlife Service. 2013. *Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California*. Sacramento, California. xviii + 605 pp. https://www.fws.gov/sfbaydelta/EndangeredSpecies/RecoveryPlanning/Tidal_Marsh/index.htm

Takekawa et al⁴ note that “sanitary landfills and riprap shorelines are also sources of predators” of tidal marsh vertebrates. Riprap is known to attract nuisance species. Claffey et. al⁵ reported a “widespread infestation of oceanfront riprap by roof rats (*Rattus rattus*) during the summer months of 1979 in Ventura County. And Breaux (2000)⁶ laid out the adverse impacts of rats on listed species:

“A 1992 report on the status of wildlife in the San Francisco Bay stated that there existed a “critical need” for research on the population dynamics and distributions of introduced mammalian predators such as the red fox, the Norway rat, and the roof rat (USFWS 1992). The report stated that techniques such as the reintroduction of the coyote to control the red fox in the South Bay, should be investigated. Control of rats has not been implemented and continues to be a problem in the South Bay for endangered species, such as clapper rails and, quite possibly, salt marsh harvest mice (*Reithrodontomys raviventris*). Additional threats to other target species selected by this project as representative of wetland species in the San Francisco Bay region (e.g., California voles (*Microtus californicus*), ornate shrews (*Sorex ornatus californicus*), salt marsh wandering shrews (*Sorex vagrans haliocoetes*), and amphibians, reptiles, terrestrial invertebrates in general, and some ground nesting birds) probably occur.

Studies of South Bay marshes have documented predation of not only clapper rail eggs, but also of live chicks. While the primary predators may be raccoons (*Procyon lotor*), red foxes (*Vulpes regalis*), feral dogs, or feral cats, rats have been seen in the South Bay in relatively large numbers (Foerster et al. 1990; Albertson, pers. comm.; Harding, pers. comm.). Harvey (1988), in a study of clapper rails in three south San Francisco Bay marshes, attributed 24 percent of nest failures to Norway rats. A 1992 U.S. Fish and Wildlife study of hatching success and predation for 54 active clapper rail nests in south San Francisco Bay found rodents to be responsible for 90% of the eggs destroyed and 79% of the predation at monitored nests. Rodents were thought to be the predators because of the characteristic debris left behind after feeding, in this case egg shells, egg contents, and chick body parts. Other characteristics peculiar to rodent predators is the manner of leaving half of the egg shell intact with visible tooth marks, or a U-shaped notch eaten into the side of the shell (USFWS 1992 and 1997).”

It is evident that riprap provides habitat for non-native predators including rats and that rats have been documented to have adverse impacts to listed and rare species. The use of riprap should be severely restricted, voids should be filled to remove potential habitat for nuisance species and predators, the prohibition of the use of riprap adjacent to tidal marsh habitat or sensitive species habitat must continue, and monitoring of existing riprap for nuisance species should be required. If nuisance/predatory species are detected, consultation with the USFWS and California Department of Fish and Wildlife (CDFW) should be required and appropriate means of eradication identified and approved by these agencies. In addition, we encourage Cargill to explore the use of nature-based solutions where possible to provide alternative means of

⁴ Takekawa, John Y., Isa Woo, H. I. L. D. I. E. Spautz, N. A. D. A. V. Nur, J. LETITIA Grenier, Karl Malamud-Roam, J. CULLY Nordby, ANDREW N. Cohen, Frances Malamud-Roam, and S. E. W. La Cruz. "Environmental threats to tidal-marsh vertebrates of the San Francisco Bay estuary." *Studies in Avian Biology* 32 (2006): 176.

⁵ Claffey, Daniel P., Madon, Minoo B., Smith, Randall T. *An Integrated Pest Management Approach to Roof Rat Control in Oceanfront Riprap, Ventura County, California*. 1986. *Proceedings of the Twelfth Vertebrate Pest Conference (1986)*. Paper 12

⁶ Breaux, Andr  e. Non-Native Predators: Norway Rat and Roof Rat *Rattus norvegicus* and *Rattus*. Goals Project. 2000. Baylands Ecosystem Species and Community Profiles: Life histories and environmental requirements of key plants, fish and wildlife. Prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project. P.R. Olofson, editor. San Francisco Bay Regional Water Quality Control Board, Oakland, Calif.

berm protection to reduce potential significant adverse impacts to native wildlife including rare and listed species.

DEA p. 2-37 – 2.10.1.5 Weed Management – The DEA states:

“Field inspections and vegetation signatures visible in aerial imagery suggested that among the species colonizing temporarily disturbed areas, invasive species such as perennial pepperweed (*Lepidium latifolia*) were absent and/or not problematic. Invasive species control BMPs were generally unnecessary at locks (WRA 2016).”

It is clear from reading through the WRA document that at least three dredge locks were studied, but not clear whether all dredge locks utilized during the period of 2010-2015 were inspected and assessed, or whether the condition of dredge locks utilized prior to that time were analyzed.

The 2016 WRA analysis of BMPs included figures that provide an analysis of the current condition of two dredge locks: “Figure 2. Estimated areas of proposed work for access of Lock 2 within Cargill’s Solar Salt System” and “Figure 3. Estimated areas of proposed work for access of Lock 26 within Cargill’s Solar Salt System.”

Figures similar to these should be provided at the time of permit authorization, for all dredge locks that may be utilized during the life of the proposed BCDC permit. Comparisons could then be made between the initial figures and those provided for several years after dredge lock use. These comparisons could then help assess whether the areas impacted by dredge lock access are adequately restoring to desired vegetation targets after the dredge lock has been used. As an example, Figure 3 would seem to indicate this is not entirely the case. While the analysis included in the figure does not indicate the presence of any of the four aggressive non-native invasive species targeted by the Weed Management Program, the figure does indicate that 2,121 sq ft of the total area of disturbance (4,499 sq ft), nearly one half of the area disturbed consisted of “weedy upland grasses and alkali heath” at the time the dredge lock analysis was performed. Photo documentation of areas of disturbance should be provided in annual monitoring reports to the resource and regulatory agencies and in addition to reviewing for the presence of non-native invasive species, the disturbance area should be monitored to determine whether the areas of disturbance remain constant or increase in size (i.e. whether the impacted area remains constant or whether the footprint increases with each episode) and whether or not these areas revert to habitats that can support listed and rare species.

Puccinella maritima (seaside alkaligrass) should be added to the list of non-native invasive species that should be monitored and if documented, removed.

The Weed Management Program should include a BMP that requires survey of areas to be impacted prior to initiation of work and removal of any detected non-native weedy species in advance of the proposed work to avoid spread of non-native invasive species.

DEA p. 2-37 to 2-38 – 2.10.2 Lock Access/Egress – Annual reports of proposed and completed work should indicate whether amphibious excavators have been utilized to “walk” over lock berms, points of entry into the

ponds should be noted for the resource and regulatory agencies and before and after photos provided of areas where the amphibious excavators have “walked” over lock berms in monitoring reports to document that the impacts are indeed temporary in nature and do not require the implementation of remedial measures.

#7 - The DEA states that “Re-useable sheet piles may be placed on the outboard side of a lock to expedite consolidation of material used to seal the access cut, which in turn expedites revegetation in the vicinity of the cut,” but does not indicate how long these sheet piles may remain in place, only that the “The sheets would remain in place until they are needed at another site to help seal another lock.” How long are these sheet piles typically left in place? Do they have any adverse impacts to adjacent habitats? Do they result in localized erosion of adjacent wetlands or tidal flats along the tidal sloughs?

#9 – Are compliance inspections ever performed by the regulatory and resource agencies to determine that “pre-existing marsh elevations are restored?”

DEA p. 2-41 – 2.10.3 Materials Stockpiles – How often, if ever, are areas that are not identified as existing stockpile areas utilized on the outboard sides of the salt pond levees or within the interior of the salt ponds? Is it a requirement that these areas be identified prior to their use in the Advanced Notification of Proposed Work reports for regulatory and resource agencies review and comment? If new stockpile areas are utilized (excluding those placed on dry land and not in wetlands and pond interiors) how large a footprint do each of these newly utilized areas cover? It should be required that these areas of disturbance are monitored to provide assurance that they become revegetated with target native wetland species and do not become a foothold for non-native invasive species such as *Lepidium latifolium*, *Dittrichia*, etc.

DEA p. 2-41 – 2.10.3.2 Soil – The DEA states “Imported soil (i.e., soil not originating within areas owned or controlled by Cargill) must be reviewed and approved in advance by the Environmental Manager designated by Cargill.” Are the imported soil reports regularly reviewed by the regulatory agencies?

DEA p. 2-42 – 2.10.4 Sediment Removal from Intake Structures – We commend Cargill for proposing a method of sediment removal from intake structure that has the potential to provide much more localized impacts by using divers to suction accumulated sediment rather than using dredges, barges and cranes. BCDC Permit No. 4-93 – Special Condition G required:

“G. **Mercury Testing.** During the course of the first five years of the ten-year authorization, but no later than February 16, 2000, the permittee shall conduct a one-time mercury testing program, after approval by the United States Fish and Wildlife Service and Regional Water Quality Control Board, consisting of the following: (1) a comparison of levels of bioavailable mercury in selected salt pond levees and adjacent tidal marsh habitats; and (2) sampling of the prey of California clapper rails before, during and after a selected dredge lock access event. The results of these tests shall be submitted to the Commission. Depending upon the results, the Executive Director may impose further testing measures which the permittee, at its expense, shall fulfill or he shall provide a letter indicating that the testing satisfactorily indicates that the amount and/or type of mercury does not pose a threat to species of concern. If the tests indicate levels of concern, further management measures, as agreed up by the permittee and the Executive Director, shall be implemented.”

Was this testing completed as required by Permit No. 4-93? If so, were any areas identified that might pose concerns for the work under review in this DEA? Have areas where sediment removal may occur been previously tested for environmental contaminants?

The annual reports of proposed and completed work should indicate the amounts of sediment removed, and whether the sediment has been reused or disposed of.

What is meant by “intake channels?” Does this refer to tidal sloughs? Intake channels do not appear to be indicated on figures that have been provided of the Cargill Solar Salt System. The 2016 WRA BMP analysis states:

“Similarly, aerial photos were used to verify the work area during dredging of the Coyote pump station intake channel. Aerial photos showed that the intake channel to the main intake pump on Alameda Creek was dredged in early 2014, and all dredging occurred within the existing, unvegetated channel. The marsh habitat on either side of the channel appears untouched by dredging activities. Although there are no specific BMPs that prescribe impact avoidance measures for rip rap installation or pump intake maintenance, WRA was able to verify that Cargill follows the BMP principles while conducting additional maintenance activities to avoid and minimize impacts to sensitive biological resources.”

This text would suggest that marsh habitat is not impacted by the proposed activity, however, the DEA states, “Intake channels also require maintenance. Maintenance of intake channels may include vegetation and debris removal as well as sediment removal. Vegetation and debris removal may require use of heavy equipment on mats.” The DEA also indicates that “there has been no need for sediment removal during the baseline period” therefore this is considered “new work.” Before finalizing the DEA, please provide information on where the “intake channels” are located and provide some estimate of the amounts of vegetation and types of vegetation that may be removed. The impacts of the proposed activity on rare and listed species and to adjacent tidal marsh habitat and tidal flats should be analyzed and if necessary, additional BMPs and/or mitigation should be required.

DEA p. 2-52 to 2-53 – Berm Maintenance – 3 Spills – The 2016 WRA BMP analysis indicated that spillage onto the marsh plain rarely, if ever occurs and in those instances where it has occurred, the material has been removed by hand. If spillage does occur and the material cannot be removed by hand, then it should be required that the regulatory and resource agencies will be contacted, the appropriate course of action should be determined by these agencies, and monitoring of the situation should be required until the issue is determined to be resolved by the agencies.

DEA p. 2-53 “Berm Maintenance-10: Vehicular Traffic” – We believe there may be a typo on this particular item. The Best Management Practice (BMP) states, “**Vehicles** driving on berms, depending on the area and conditions, shall not exceed 35mph.” Surely this is an error and the intent was to instead state, “not to exceed 15 mph”? Traveling at speeds greater than 15 mph on levee roads is certainly unsafe, has the potential to generate significant fugitive road dust ^{7,8} and could result in injuries to wildlife utilizing the berms for roosting

⁷ “Fugitive Road Dust in the Eastern Coachella Valley.” South Coast Air Quality Management District.

<https://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/eastern-coachella-valley/fugitive-road-dust.pdf?sfvrsn=8>

⁸ Demer, Lisa. 2017. “Over 15 mph, we make clouds’: Road dust plagues rural Alaska.” <https://www.rcinet.ca/eye-on-the-arctic/2017/08/14/dust-busting-bush-alaska-clouds-with-choking-dust-and-residents-want-to-do-something-about-it/>

or nesting. In addition, speeds of 35 mph would pose significant hazards in those areas where pedestrian traffic is permitted.

DEA p. 2-55 – Lock Access/Egress – 10. Sediment within the Access Cut. The DEA states:

“If additional sediment is needed to achieve the optimal elevations for reestablishing vegetation within the access cut, sediment will be removed from the slough channel and placed in the access cut once the barge has exited.”

How often does removal of sediment from the slough channel occur and what amounts of material are excavated? Is it required that this activity is reported in the annual report of completed work along with identification of the location where the removal occurred and the amounts of material removed? What are the impacts of this type of activity and is the area impacted monitored to ensure there are no adverse impacts to adjacent tidal marsh or tidal flats? This information should be provided in the DEA. The conversion to amphibious excavators should hopefully eliminate this practice.

The 2016 WRA analysis of BMPs mentions, “Excavate a “sump” in the adjoining slough to accommodate excavated access cut muds. The excavated material for the sump will be placed atop an adjacent levee.” Is this an accurate description of an impact that may occur as a dredge lock is being accessed? If it is, this potential impact should be included in the DEA and analyzed. If Cargill plans to revert completely to the use of an amphibious excavator, or to introduce the equipment into the ponds from land, then this particular action (excavation of a slump in the adjoining slough) may no longer be an issue of concern.

DEA p. 3-69 – Impact BIO-1: Substantial Adverse Effect on Candidate, Sensitive, or Special Status Species Less than Significant:

The DEA has determined that the adverse impacts of the proposed project on listed and rare species is less than significant. The DEA describes how implementation of the proposed Best Management Practices will reduce the adverse impacts of construction related disturbance on these species, but fails to consider the potentially significant adverse risk to roosting and nesting birds that may result from bridging or culverting gaps in internal levees to make them drivable.

The analysis of BMPs provided by WRA in 2016, mentions that Cargill “continues to create 25-foot gaps in a number of levees to improve water flow” and that these gaps “create new islands for birds that are isolated from predators.” The review of BMPs documented the ongoing practice of creating gaps in internal levees as part of the operations of the salt making process and the value gaps in internal levees provide to roosting and nesting birds.

The DEA cites the U.S. Army Corps of Engineers (USACE) permit, File Number 19009S98, in particular that:

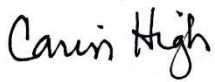
“...mitigation for ongoing solar salt production has already been provided under the Mitigation in Perpetuity agreement with USACE (File Number 19009S98). Per this document, the 49-acre restoration project is intended to satisfy the compensatory mitigation requirement for activities associated with the ongoing solar salt production in the south San Francisco Bay over the life of this permit, and, if the nature of the work remains the same, beyond to subsequent permits as well (Appendix A). As described in Section 2.6.2, the mitigation completed by Cargill covered

maintenance impacts associated with maintenance activities over approximately 30,000 acres.
[emphasis added]

The question is whether the “nature of the work remains the same” i.e., whether the adverse impacts of the proposed work remain essentially the same. The DEA has failed to identify and assess whether conversion of “most of the internal berms” through construction of bridges or culverts to drivable berms would have potentially significant adverse impacts to rare and listed species of roosting and nesting birds through exposure to increased predation and loss of habitat. Therefore, it is unknown whether the previously accepted mitigation is adequate.

Based upon our review of the DEA and the 2016 WRA analysis of BMPs, it is evident that not all impacts of the proposed Salt Pond O & M activities have been fully analyzed nor the impacts to biological resources sufficiently identified. We have also suggested additional BMPs that should be required. We thank you for the opportunity to provide comments and ask that we be kept informed of future opportunities to review and provide comments on this project.

Respectfully submitted,

A handwritten signature in black ink that reads "Carin High". The signature is written in a cursive, flowing style.

Carin High
CCCR Co-Chair

From: hollisranch@yahoo.com
To: [Olsson, Schuyler@BCDC](mailto:Olsson_Schuyler@BCDC)
Cc: tkyaw@redwoodcity.org; jchapel@redwoodcity.org; mpatolo@redwoodcity.org; alee@redwoodcity.org; cityatty@redwoodcity.org
Subject: Re: Bay Conservation and Development Commission
Date: Friday, April 30, 2021 6:46:37 PM
Attachments: [flood_16.JPG](#)
[flood_13.JPG](#)
[flood_14.JPG](#)
[flood_15.JPG](#)

On Friday, April 30, 2021, 06:34:33 PM PDT, hollisranch@yahoo.com <hollisranch@yahoo.com> wrote:

Hello Schuyler Olsson,

Received in the mail today the notice of intent to finalize an environmental assessment for Cargill, Incorporated Solar Salt System Maintenance and Operations Activities.

My backyard is the Cargill Salt Ponds, I live at Harbor Village Mobile Home Park located at 3015 E Bayshore Rd, SPC 1, in Redwood City, 94063. My question to you is this: Can we add a stipulation that they have to fix the Canal flooding during heavy rains? I am just keeping this simple, can they raise the height of the canal, one side is only needed, the side of the homes and businesses by a foot or two to help eliminate or slow down the flooding of my home? It does a lot of damage and is an electrical and disease hazard when flooding occurs.

Attached is just a few pictures of my backyard from the canal flooding.

Any help would be appreciated.

Best regards,

Dan Hollis
3015 E Bayshore Rd, SPC 1
Redwood City, Ca. 94063
(650) 576-7122









San Francisco Bay Regional Water Quality Control Board

June 7, 2021

Sent via electronic mail: No hardcopy to follow

San Francisco Bay Conservation and Development Commission
Attn: Schuyler Olsson, Coastal Program Analyst (schuyler.olsson@bcdcc.ca.gov)
375 Beale Street, Suite 510
San Francisco, California 94105

Subject: San Francisco Bay Regional Water Quality Control Board Comments on
the *Draft Environmental Assessment of Cargill, Incorporated Solar Sea
Salt System Maintenance and Operations Activities*
SCH No. 2020080442

Dear Mr. Olsson:

San Francisco Bay Regional Water Quality Control Board (Water Board) staff appreciates the opportunity to review the *Draft Environmental Assessment of Cargill, Incorporated Solar Sea Salt System Maintenance and Operations Activities* (Draft EA). The Draft EA evaluates the potential environmental impacts associated with implementing maintenance and operations activities at Cargill's solar salt ponds (Project).

Project Summary. The purpose of the Project is to continue existing maintenance and operational activities at Cargill's Solar Salt Systems in Newark/Fremont and Redwood City in a safe and environmentally protective manner over the next 10 years.

Summary. As is discussed below, the Draft EA lacks sufficient detail in the discussion of bittern storage in ponds at the Newark plant and in the discussion of the proposed vinyl sheet pile pilot study. We also continue to believe that the proposed vinyl sheet pile pilot study is not a routine maintenance activity and should not be included in the activities covered by the routine maintenance and operations permits.

Comment 1. More information is needed on the storage of mixed sea salts (bittern) in ponds at Newark Plant 2 and the potential for accidental releases of stored bittern to negatively impact surface waters.

Section 2.5.1, Salt-Making Process (pages 2-11 through 2-12).

Text in Section 2.5.1 describes the creation of mixed sea salts (bittern) as a by-product of the salt-making process.

After the majority of the NaCl is precipitated, the remaining brine, which primarily contains salts that are more soluble than NaCl, is referred to as

JIM McGRATH, CHAIR | MICHAEL MONTGOMERY, EXECUTIVE OFFICER

mixed sea salts [MSS], or historically “bittern.” The MSS contain chloride, bromide, sulfate, sodium, potassium, and magnesium, as well as residual NaCl. These remaining MSS continue through the salt production process, where further NaCl may be recovered and additional commercial products used for road de-icing and dust suppressant are harvested. Excess MSS that has not been sold as an alternative salt product is stored in Ponds P2-12 and P2-13. Facing increasingly limited markets for these MSS-based products, Cargill has recently begun preparations to develop and seek entitlements for a separate project, the Enhanced Processing and Removal of Mixed Sea Salts project (the “MSS Project”). The MSS Project, if approved, would deploy innovative technology to achieve enhanced recovery of commercial product from the MSS. Residual salts would then be blended into the East Bay Dischargers Association (EBDA) wastewater conveyance system for ultimate discharged into the Bay, in compliance with EBDA’s National Pollutant Discharge Elimination System (NPDES) permit. In addition to extracting additional salts from the inventory, this project would proactively address a potential long-term threat from SLR on the solar salt operations by reducing the volume and salinity of brines stored in ponds closest to the Bay. This potential project is considered in the cumulative impact analysis (Section 3.15). Consideration of the present Project that is the subject of this EA is not dependent on consideration of the MSS Project, which is currently in very preliminary stages of consideration.

The discussion of cumulative impacts in Section 3.15 includes the following text from Section 3.15.1.7, Hydrology and Water Quality:

The MSS Project would address the potential mid-term risk of SLR such as the susceptibility of the MSS ponds to berm overtopping and potential failure during a 100-year storm surge.

As we have noted in prior comments provided to Cargill, bittern may have significant adverse effects on beneficial uses if it is discharged to waters of the State. The berms around existing salt ponds were not engineered to provide containment of potentially toxic substances and sea level rise is likely to compromise the containment provided by salt pond berms. While Cargill is working on the MSS Project, it should provide the resource agencies with a characterization of the current extent of bittern storage in earthen ponds and the rate at which bittern is accumulating. If the MSS Project is found to be infeasible, the EA should discuss alternate proposals for the removal of stored bittern from the salt pounds.

On May 8, 2013, the Water Board submitted a letter to Cargill that requested a technical report on the stockpiling of bittern in Ponds 10 and 13 in Newark (See Attachment), pursuant to Water Code Section 13267. This letter required the following information.

- When did Cargill begin stockpiling Bittern Salt at Pond 10 and at Pond 13 (Figures 1 and 2, Attachment A) at the Newark Plant?
- What is the chemical composition of the Bittern Salt located in Ponds 10 and 13?

- What is the total quantity of Bittern Salt (liquid and solid) that Cargill generates each year from salt harvesting at the Redwood City and Newark Plants? Since Cargill does not stockpile all of the Bittern Salt it generates, how much Bittern Salt generated each year is sold and how much is stockpiled (provide an annual accounting from 2005 to present)?
- Based on the above information, what are the projected accumulation rates of Bittern Salt in Pond 10 and in Pond 13 and when will these ponds reach capacity (i.e., Bittern Salt stockpiled to the height of the surrounding levees or available bittern ponds)? What is Cargill's plan if current storage for Bittern liquid and solid is at capacity?
- Bittern Salt is a byproduct of current salt-harvesting operations that is being stockpiled, at least in part, for a future potential use. Currently, there are neither the market conditions nor the identified uses for Bittern Salt to eliminate existing stockpiles. With this in mind, at what point (i.e., at what stockpile limit and/or timeframe) will Cargill consider an alternative management strategy to address the Bittern Salt stockpiles? What is Cargill's contingency plan to manage or dispose of Bittern Salt if the stockpiling continues? What is Cargill's plan if current storage for Bittern liquid and solid is at capacity?
- What are the best management practices Cargill is implementing at Ponds 10 and 13 to protect beneficial uses of waters of the State? Does Cargill have a waste management plan for byproducts from its salt harvesting operations, including Bittern Salt? Are there plans to develop or improve either, or both, of the above?

Cargill has not yet provided most of the information requested by the Water Board's May 8, 2013, letter. The proposed MSS Project provides a partial response to the information requested in the fifth bullet. If the MSS Project is determined to be feasible, please provide an estimate of the time necessary to reduce the quantity of bitterns stored in earthen salt ponds that are vulnerable to structural failure or overtopping by sea level rise. Cargill should also describe potential alternative means of disposing of the bitterns if the MSS Project proves infeasible. In addition, please provide the remaining storage capacity of Ponds P2-12 and P2-13 and the anticipated date when that capacity may be exhausted. If additional capacity for bitterns is needed, please identify the proposed locations for additional bittern storage and the proximity of tidal marshes and Bay waters to those potential storage locations.

Comment 2. More information is needed to describe the proposed vinyl sheet pile pilot study.

Section 2.10.1.2, *Sea Level Rise Adaptation* (pages 2-32 through 2-34).

Text on the bottom half of page 2-31 briefly discusses Cargill's intention to conduct a pilot study of the use of vinyl sheet piles to reinforce earthen berms. This discussion does not address any potential environmental impacts associated with the installation of vinyl sheet piles and lacks a sufficiently detailed discussion of the proposed pilot study.

Cargill should provide a more detailed description of the proposed pilot study. The pilot study should include the following components:

The study should identify control and experimental segments of berms.

The pilot study is intended to determine if vinyl sheet piling provides enhanced stabilization of salt pond berms. The study should select control and experimental reaches of berms. Control and experimental reaches should be sufficiently similar to support conclusions with respect to greater durability of berms reinforced with vinyl sheet piles. Control and experimental berms should have similar compositions, dimensions, and exposure to wave energy. A sufficient number of control and experimental locations should be selected to support generalization from the pilot study berms to other salt pond berms.

At this time, Figure 2-7 shows two proposed Trial Areas for placing vinyl sheet piles in berms around Pond P2-12. Trial Area 1 is located in a reach of berm that separates Pond P2-12 from a channel that runs between Pond P2-13. Trial Area 2 is located in a reach of berm that separates Pond P2-12 from a tidal marsh between Pond P2-12 and open Bay waters. Based on Figure 2-7, the marsh between the Pond P2-12 berm and open water is about 1,000 feet wide. Please explain the rationale for selecting these two Trial Areas and the rationale for only selecting two Trial Areas. The two Trial Areas do not appear to be especially vulnerable to wave action or overtopping by tides. Also, the pilot study does not appear to have selected control areas. Without control study areas, conclusions about the efficacy of vinyl sheet piles may be speculative.

The study should determine how long sheet piles are to be left in place prior to testing ease of removal.

The pilot study proposes to test the ease of removal of vinyl sheet piles. But the proposal does not specify when ease of removal will be tested. Please clarify how long sheet piles will be in place in a berm before an attempt is made to remove them. Will attempts to remove sheet piles be made at different intervals of time to determine if removal is more difficult after several years in place. For example will some sheet piles be removed after one year, while others are removed after three and five years.

The study should identify the parameters that will be assessed to determine if the sheet piles are enhancing berm stability.

The proposal doesn't describe in detail how the effect of the vinyl sheet piles will be assessed. Please explain if the study will assess changes in berm width and berm height of control and experimental berms. Will the berm surfaces be examined for evidence of rilling and sinkholes? How many times a year will such measurements be made? Will measurements be triggered by major storm events? For how many years will the performance of the vinyl sheet piles as berm strengthening measures be assessed?

Water Board staff have been asking for additional information about the proposed pilot study for over a year. Since the pilot study is still in development, it is not an actual maintenance and operations activity. The pilot study should be covered under separate permits specific to the pilot study.

Text on page 3-90 of the Draft EA describes the vinyl sheet piles as "a modernized imported material compared to Bay mud". It is more accurate to describe vinyl sheet

piles as an anthropogenic material that will be studied as a potential reinforcement of berms constructed from native Bay mud.

Comment 3. Please provide more documentation on the prior use of re-useable fiberglass sheet piles during lock access / egress.

Section 2.10.2, Lock Access / Egress (pages 2-33 through 2-37)

This section discusses the use of reusable fiberglass sheet piles in the creation of dredge locks for equipment access into ponds. Text in bullet 7 of Section 2.10.2 states that Cargill has used fiberglass sheet piles and vinyl sheet piles for several years. Water Board staff do not recall seeing the use of sheet piles for lock access discussed in the lists of proposed maintenance projects or the reports on completed maintenance projects. Please provide documentation establishing the history of the use of temporary sheet piles at lock sites. This documentation should describe the length of time these sheet piles are in place at lock access / egress sites and the size of these sheet piles relative to the size of the vinyl sheet piles proposed for use in the pilot study.

Comment 4. The screening protocols for imported riprap and soil should be revised to prevent the unintentional importing of contaminated materials into the salt ponds.

Section 2.10.3, Stockpiles, Section 2.10.3.1, Riprap, and Section 2.10.3.2, Soil (page 2-41)

This section and subsections discuss requirements for riprap and soil that is imported to the salt ponds for maintenance work on the berms. This section appears to be, in part, out-of-date and should be updated. Appendix C should also be updated to provide better guidance on the appropriate protocols to be used in assessing whether riprap or soil proposed for importation to the salt ponds are free of contaminants that may impair beneficial uses of waters of the State. Section 2.10.3.1 and Appendix C allow the importation of concrete debris for use as riprap in the salt ponds. The Water Board does not accept the use of concrete rubble as riprap. Concrete debris lacks the structural properties of rock riprap. In addition, as concrete rubble breaks down it can raise the pH of adjacent waters. Please revise Section 2.10.3.1 and Appendix C to prohibit the use of concrete debris as riprap in the salt ponds.

Section 2.10.3 describes the screening of riprap and soil proposed for use in the salt ponds.

The following guidance from multiple agencies is utilized as applicable based on the source, type, and intended use location of imported fill:

1. The RWQCB soil chemistry threshold for reuse of soil in aquatic environments (RWQCB2006)
2. DTSC clean import fill material guidelines (DTSC 2001)
3. RWQCB Environmental Screening Levels (RWQCB 2019)

Applicable criteria are determined prior to import of any material.

Material imported to the salt ponds should not pose an unacceptable level of risk to marine life in the salt ponds and the adjacent marshes and Bay waters. The reference cited as RWQCB 2006 provides screening levels appropriate to protect marine life in San Francisco Bay. The Environmental Screening Levels (ESLs) in RWQCB 2019 are used to expedite the identification and evaluation of potential environmental concerns at contaminated sites. The ESLs are based on exposure routes from a contaminated media to receptors (e.g. residents of housing, workers exposed during an 8-hour workday, etc.). ESLs are not available for marine species exposed to chemicals present in soil used in levees. Therefore the third bullet should be deleted.

To ensure that appropriate measures are being implemented to protect marine life, please provide examples of the screening measures that have been implemented to characterize riprap and soil imported for use in maintenance of the berms in the salt ponds in prior years.

Please update Section 2.10.3 to include a more detailed description of screening protocols that are used to ensure that soil placed in contact with Bay waters does not contain constituents at concentrations that may pose a risk to aquatic life in the Bay. In addition, Appendix C should be revised to include a requirement to document that riprap and soils have been screened against appropriate screening levels, using an appropriate density of sampling, appropriate analytical methods, and appropriate screening levels.

Comment 5. The discussion of impacts does not include a discussion of potential impacts to marine life that would result from an accidental release of bitterns (MSS) from Pond 2-12 and Pond 2-13.

Section 3.4.4, *Impact Analysis*

The Draft EA acknowledges that bitterns are stored in Pond 2-12 and Pond 2-13. The Draft EA also acknowledges the potential for the accidental release of bitterns. Please revise Section 3.4.4 to assess the potential impacts to marine life associated with an accidental discharge of bitterns to Bay waters. The revision of Section 3.4.4 should discuss potential impacts associated with operating and maintaining some salt ponds as indefinite storage units for bitterns. Bitterns are highly saline and usually contain high concentrations of metals. This discussion should address potential impacts of metals and salt concentrations on groundwater quality beneath the salt ponds. The discussion of potential impacts to biological resources should also discuss impacts to wildlife habitat and wildlife if bitterns are discharged to waters of the State through breaches in the berms around the ponds in which bittern is stored.

The Draft EA should also be revised to include mitigation measures for the accidental release of bitterns to Bay waters and tidal marshes.

Comment 6. The discussion of potential impacts associated with the use of vinyl sheet piles does not include ecotoxicity data for impacts to marine species.

Section 3.8.3.1, Impact HAZ-1: Transport, Use, or Disposal of Hazardous Materials (pages 3-108 and 3-109)

Text in Section 3.8.3.1 discusses potential toxicity of materials used in the vinyl sheet pile pilot study.

The proposed SLR study would install vinyl sheets to strengthen the berms. The vinyl sheets would be installed with a sealant (De Neef Swellseal) between the sheets to seal the sheet pile knuckles per the manufacturer's instructions. The sealant, which cures and swells in the presence of moisture and water, is solvent-free and is applied with a caulking gun. During installation, a 3/8 inch bead of sealant would be applied to the vinyl sheets driven into the berm, allowing for any excess material to be pushed out the top of the sheet pile and easily wiped off and disposed of if need be (Cargill 2019). . . The Safety Data Sheet (SDS) for Swellseal for Sheet Piles indicates that it has low to very low hazard ratings. and that the primary active ingredient in the sealant is a volatile compound called toluene diisocyanate (TDI) (it has several other chemical and trade names). Based on an SDS produced by a different manufacturer, TDI is only present at the very low concentration of < 0.1 percent wt/wt and as a volatile product it would be expected to dissipate upon exposure to air (EOA 2019). TDI therefore represents less than 0.1 percent (one part per thousand) by weight of the total weight of the marketed product. In addition, TDI reacts with water to form stable, insoluble polyureas, which are inert solids. The reactivity of TDI with water greatly limits its mobility, and even an accidental spill would be localized and have only transient impacts (EOA 2019). According to a memo from EOA to Cargill (EOA 2019), a Dow Product Safety Assessment for TDI provided some aquatic toxicity testing results which indicated that there would need to be 10 – 100 milligrams per liter (mg/L) of the actual 100 percent TDI active ingredient present to exert the toxicity reported. This is likely several orders of magnitude greater than the amount of TDI that could be released from a vinyl sheet pile seam sealed with Swellsea (EOA 2019). Because the amount of TDI present in the sealant is very low and any TDI that might be released would turn into a predominantly insoluble stable polyurea with limited mobility in soil (particularly in the very low permeability Bay mud contained in the Cargill salt pond berms), EOA concluded that the risk to the environment from use of the sealant in the vinyl sheet pile study is low. This impact would be less than significant.

This discussion doesn't state if the toxicity data in the SDS was for human toxicity or for toxicity to marine life in saline waters. Please provide full copies of the SDS so that they can be reviewed for relevance to potential toxicity to marine species present in the marine waters and tidal marshes adjacent to the salt ponds. Also, the text acknowledges that the SDS referenced in the Draft EA was not for the actual product proposed for use in the pilot study. Please provide aquatic toxicity data relevant to

marine species for the actual sealant that will be used in the pilot study. The text states that, "a Dow Product Safety Assessment for TDI provided some aquatic toxicity testing results". However, the text does not clarify if the aquatic toxicity data were for freshwater species or marine species. Please provide aquatic toxicity data for impacts to marine species for TDI. These data should identify the marine species used in the toxicity assessment.

Comment 7. The Draft EA does not include mitigation measures for the accidental release of stored bitterns.

Section 3.8.3.2, Impact HAZ-2: Potential for Upset and Accident Conditions Involving the Release of Hazardous Materials

Please revise Section 3.8.3.2 to include appropriate mitigation measures for the accidental release of stored bitterns to open Bay waters and tidal marshes. .

Comment 8. The Draft EA does not include a discussion of potential impacts to surface water quality associated with accidental releases of bitterns.

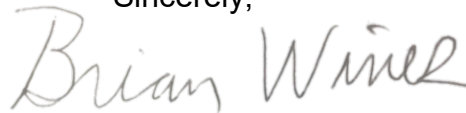
Section 3.9.3.1, Impact HYD-1: Effects on Surface Water Quality

Please revise this impact discussion to include potential impacts to surface water quality associated with accidental discharges of bitterns stored in salt ponds if berms around bittern storage ponds fail.

Conclusion. We encourage the Project proponent to expand the discussion of bittern storage and the discussion of the proposed pilot study of the effectiveness of adding vinyl chloride sheet piles to existing earthen berms.

If you have any questions, please contact me at (510) 622-5680, or via e-mail at brian.wines@waterboards.ca.gov.

Sincerely,



Brian Wines
Water Resources Control Engineer
South and East Bay Watershed Section

cc: State Clearinghouse (state.clearinghouse@opr.ca.gov)
BCDC, Michael Ng (michael.ng@bcdcc.ca.gov>)

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June 1, 2021

File Ref: SCH #2020080442

San Francisco Bay Conservation and Development Commission
Schuyler Olsson, Coastal Program Analyst
375 Beale Street, Suite 150
San Francisco, CA 94105

VIA ELECTRONIC MAIL ONLY (schuyler.olsson@bcdcd.ca.gov)

Subject: Comment letter for the Draft Environmental Assessment (EA) for Cargill, Incorporated Solar Sea Salt System Maintenance and Operations Activities, Alameda and San Mateo Counties

Dear Schuyler Olsson:

The California State Lands Commission (Commission) staff has reviewed the Draft EA for the Cargill, Incorporated Solar Sea Salt System Maintenance and Operations Activities (Project), which is being prepared by the San Francisco Bay Conservation and Development Commission (BCDC). BCDC, as the public agency with the greatest responsibility for supervising or approving the Project, is the lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). The Commission is a trustee agency for projects that could directly or indirectly affect State sovereign land and their accompanying Public Trust resources or uses. Additionally, because the Project could involve work on State sovereign land, the Commission may act as a responsible agency.

Commission Jurisdiction and Public Trust Lands

The Commission has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The Commission also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub. Resources Code, §§ 6009, subd. (c); 6009.1; 6301; 6306). All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the common law Public Trust Doctrine.

As general background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. The state holds these lands for the benefit of all people of the state for statewide Public Trust purposes, which include but are not limited to waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. On tidal waterways, the State's sovereign fee ownership extends landward to the mean high tide line, except for areas of fill or artificial accretion or where the boundary has been fixed by agreement or a court. On navigable non-tidal waterways, including lakes, the state holds fee ownership of the bed of the waterway landward to the ordinary low-water mark and a Public Trust easement landward to the ordinary high-water mark, except where the boundary has been fixed by agreement or a court. Such boundaries may not be readily apparent from present day site inspections.

Based on the information provided and a review of in-house records, the proposed project may extend onto State sovereign land within the Commission's jurisdiction. According to the project description, the proposed maintenance and operations activities, salt ponds, earthen berms, and associated infrastructure near Newark and Redwood City appear to be located within an area associated with General Lease 8596 issued to Cargill, Inc. Placement of new riprap or repair and replacement of existing riprap on the outboard side of berms is not authorized under Lease 8596. At this time, staff does not have sufficient information to determine if the proposed riprap installation, repair, or replacement currently extends or will extend onto lands under the Commission's jurisdiction. Commission staff will request detailed plans and drawings of existing riprap locations and proposed riprap installation from the Project proponent.

Project Description

BCDC proposes to approve a 10-year permit to allow for continued operations and maintenance activities to meet the proponent's objectives and needs by maintaining the integrity and stability of infrastructure necessary to continue salt production activities. The proposed Project would also develop alternative maintenance methods for this infrastructure to reduce environmental effects, improve efficiency, and adapt to changing climate conditions.

From the Project Description, Commission staff understands that the Project would include the following component that has the potential to affect State sovereign land and that would not be consistent with the operations and maintenance activities currently authorized under Lease 8596:

- **Riprap Installation, Repair, Or Replacement.** Existing and proposed infrastructure maintenance activities include placement of new riprap or repair/replacement of existing riprap on the outboard side of berms, with silt fence placement as necessary. In severely eroded areas, imported fill material would be placed, followed by filter fabric, and finally riprap as the final erosion prevention layer. All outboard berms would have a slope maintained at approximately 4:1.

Environmental Review

Commission staff requests that BCDC consider the following comment on the Project's Draft EA, to ensure that Project activities that could affect State sovereign land are reviewed by Commission staff and, if necessary, evaluated with the EA to support any future approvals for the Project.

1. Annual Work Plan: As indicated in the jurisdictional comments, above, various proposed Project activities are not contemplated under the operations and maintenance terms of existing Lease 8596. Section 2.10 of the Draft EA describes how the proponent develops and submits an annual Work Plan to various agencies that outlines the anticipated work to be conducted. Commission staff understands that riprap placement or repair would be included in this document, and requests that the Commission be added to the list of agencies receiving both the annual Work Plan and completion report of activities to ensure that all actions on State sovereign land are authorized and in compliance with lease terms. The Commission is therefore also considered a pertinent agency for purposes of the best management practice (BMP) measure "Riprap Placement-5: Agency Notification."

Thank you for the opportunity to comment on the Draft EA for the Project. As a responsible and trustee agency, Commission staff will need to rely on the Final EA for the issuance of any amended lease as specified above and, therefore, we request that you consider our comments prior to adoption of the EA.

Please send copies of future Project-related documents, including electronic copies of the Final EA and Mitigation Monitoring Program, when they become available. Please refer questions concerning environmental review to Alexandra Borack, Senior Environmental Scientist, at (916) 574-2399 or Alexandra.Borack@slc.ca.gov. For questions concerning Commission leasing jurisdiction, please contact Dobri Tutov, Public Land Management Specialist II, at (916) 574-0722 or Dobri.Tutov@slc.ca.gov.

Sincerely,



Nicole Dobroski, Chief
Division of Environmental Planning
and Management

cc: Office of Planning and Research
D. Tutov, Commission
A. Borack, Commission
A. Kershen, Commission