California Regional Water Quality Control Board
San Francisco Bay Region

Linda S. Adams
Secretary for
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Arnold Schwarzenegger
Governor

November 25, 2008
Site No: 02-01-C0994 (bkw)
ACOE File No: 2008-00146S
CWIQS Place ID: 717473

Cargill, Incorporated
720 Central Avenue
Newark, CA 94560

Attn: Mr. Patrick D. Mapelli

Subject: Water Quality Certification for Maintenance Activities and System Improvements to be Conducted Between November of 2008 and December of 2010 at the Cargill Solar Salt Systems in Alameda, Santa Clara, and San Mateo Counties.

Dear Mr. Mapelli:

San Francisco Bay Regional Water Quality Control Board (Water Board) staff have reviewed materials submitted by Cargill, Incorporated (the Applicant) in application for water quality certification for the Applicant's project to perform routine maintenance activities and system improvement work Between November of 2008 and December of 2010 at Cargill's Solar Salt Systems in Alameda, Santa Clara, and San Mateo Counties (Project). On October 2, 2008, the Applicant was informed by the United States Army Corps of Engineers (ACOE) that the Project was authorized under Nationwide Permit No. 3 (*Maintenance*) and No. 18 (*Minor Discharge*), pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899. You have applied to the Water Board for Clean Water Act Section 401 water quality certification that the Project will not violate State water quality standards.

Project Description: The following Project description is from application materials received on June 2, 2008, and supplemental information received on October 8, 2008. The Project goal is to perform routine maintenance activities and system improvement work through December of 2010 at Cargill's Solar Salt Systems in Alameda, San Mateo, and Santa Clara Counties. Work will be performed in Cargill's Newark Plants 1 and 2, Redwood City Plant, and Pond 3C of the Baumberg Complex (See Attachment 1 to this certification). All work will occur within the salt ponds during this period, with the exception of two areas of failing levee armoring on the Bay side of the western levee for Pond CP-4, located north of the Dumbarton Bridge (See Attachment 2 to this certification).

The Project area includes 12,100 acres of salt evaporation ponds, plant sites, and nearby areas in south San Francisco Bay. Figure 1 in Attachment 1 shows the areas in which the Project will be implemented. The Project is a continuation of work authorized under Board Order No. 95-115 (ACOE File No. 19009S98), with the exception that the area used for salt production has been reduced by about 60 percent since the original order was issued in 1995. Maintenance activities

are required for both the production of salt, as authorized in the present certification, and for the restoration of salt ponds in the pond complexes currently owned by the California Department of Fish and Game (CDFG) and the US Fish and Wildlife Service (USFWS). Work performed in the CDFG and USFWS ponds is authorized under Board Order R2-2008-0078, issued in August of 2008 for Phase I of the South Bay Salt Pond Restoration Program; this work is included in the tables in Attachment 1 to this certification. Maintenance associated with the former salt ponds in Phase I of South Bay Salt Pond Restoration Program is required to ensure the continued functioning of levees, water control structures, and other infrastructure as these ponds are restored to provide wildlife habitat. Maintenance activities may include the following: dredge lock access (See Figures 4a and 4b in Attachment 1) and maintenance; the placement of material to repair and protect levees; maintenance and installation of docks; maintenance, repair or replacement of marine crossings, intake channels, tide gates, brine ditches, pumps and water control structures; and the continued practice of using existing dredged material stockpile locations. See Attachment 3 for a summary of major maintenance actions. The major work activities in each pond complex are summarized below.

Alviso Pond System (A22 – A23): The Alviso ponds are now operated and managed by the staff of the USFWS' Don Edwards San Francisco Bay National Wildlife Refuge (Refuge). Ponds A22 and A23 are the only two ponds left in the Alviso Salt Pond Complex under Cargill's operational control. Cargill will work on the cross levee between Ponds A22 and A23 in 2008. Ponds A22 and A23 have been part of the refuge since 1979. Full fee ownership was transferred to the Federal Government in March of 2003.

The Refuge staff has requested that Cargill's dredge, the Mallard, be scheduled for a return to their Alviso Pond Complex in late 2008 for routine levee maintenance. If this work is performed, it will be reported in conjunction with the Refuge's Maintenance Report and performed under Board Order R2-2008-0078.

Baumberg – Pond 3C: Baumberg Pond 3C remains in the ownership of Cargill and is not part of the South Bay Salt Pond Restoration Project. Since ponds in the Baumberg Complex cannot be operated independently of Pond 3C, CDFG is still operating Pond 3C with the rest of the ponds in the complex. On behalf of CDFG, Cargill will install infrastructure to allow CDFG to operate this pond complex independently of Cargill's Pond 3C. Routine levee maintenance will also be performed at Pond 3C.

Redwood City Pond System/West Bay Ponds: The West Bay Ponds on the northwestern end of the Dumbarton Bridge were conveyed to the Federal Government in 2003. Cargill has continued to operate and maintain these ponds at the request of the Federal Government, but Cargill plans to transfer these responsibilities in the near future. Routine levee maintenance will be performed at this system. Pond SF2, located southeast of the Dumbarton Bridge and part of the West Bay Ponds, was transferred to the Federal Government on June 25, 2007. Cargill retained approximately 2 acres of this 254-acre pond for operations and maintenance purposes of the Transbay Pipeline. A donut levee was recently constructed within the pond to segregate this 2-acre section from the remaining pond. This newly constructed levee will require additional build up after the muds have cured. This work will be performed with land-based equipment.

Redwood City Plant Site: Routine levee maintenance will be performed at the plant site.

Newark Plant 1:
Levee maintenance and other routine activities will be performed in Plant 1. Significant tasks in Plant 1 include the following:

1. The Mallard, Cargill's dredge, will perform routine levee maintenance. Mud will be dredged from within the pond and placed on top of levees or the inside toe/beach of levees as needed.
2. Repair/replace a thirty-six inch diameter pipe and gate between Ponds 2 and 3.
3. Repair/replace a thirty-six inch diameter pipe and gate between Ponds 3A and 4A.
4. Exit dredge lock at Pond 2A in late 2008.
5. Cut five 12-foot gaps in the cross levee of CP-3 and Old Beard Creek, using land-based equipment, to allow for a more efficient flow of brines between CP-3 and CP-2.
6. Repair two areas of failing levee armoring on the outboard side of the western levee of Pond CP-4, north of the Dumbarton Bridge (See Attachment 2).

Newark Plant 2:
Levee maintenance and other routine activities will be performed in Plant 2. Significant tasks in Plant 2 include the following:

1. Repair/replace a thirty-six inch diameter pipe and gate between Ponds 2 and 3.
2. Plug an old siphon between Ponds 5 and 6 with earthen plugs.
3. Replace the Mowry Intake Pump discharge pipes.
4. Use land-based equipment to remove sediment buildup in front of the siphon between Pond 3 and Pond 4.
5. Build up low areas on top of levee at Pond 6 with land-based equipment.
6. The Mallard will enter the dredge lock at CP-1 in approximately October 2009.
7. Place riprap along 600 linear feet of the inside of the levee at Pond CP-5.
8. Build up low areas around Desalting Pond 11.

If Cargill's Mallard is not able to perform the currently scheduled maintenance for USFWS in the Alviso Ponds, the following additional tasks will be performed at Newark Plant 2 under the present certification:

1. Enter dredge lock at Pond 4 in late 2008.
2. Levee topping and/or beaching in Pond 3.
3. Levee topping and/or beaching in Pond 4
4. Levee topping and/or beaching in Pond 5
5. Levee topping and/or beaching in Pond 6

Impacts: The Project will have minimal impacts to waters of the State. The impacts for each of the proposed tasks in the Project are summarized in Attachment 1 and Attachment 2 to this certification. Impacts associated with levee and facility maintenance are considered temporary, since habitat will naturally re-establish at the sites of the maintenance activities. In the past, some of the most significant impacts associated with salt pond maintenance were associated with accessing dredge locks. However, the number of dredge locks being accessed has been substantially reduced due to the transfer of properties to USFWS and CDFG. The locks that remain under Cargill's control do not involve long access cuts and impacts to tidal marsh.

Mitigation: The present certification extends authorization to perform maintenance activities that were authorized initially by the Water Board in May of 1995, in Regional Board Resolution No. 95-115. Mitigation required in prior certifications, in combination with the Best Management Practices (BMPs) in Attachment 3, is considered sufficient to mitigate the impacts of extending certification for the period from October 2008 through December 2010. In addition, Cargill is assisting with the South Pay Salt Pond Restoration Project by performing maintenance in the Alviso Ponds that are currently under the control of the USFWS and by helping CDFG to isolate the operation of Cargill's Pond 3C from the CDFG's Baumberg Ponds..

Therefore, no additional mitigation is required for the present certification. Future mitigation for ongoing maintenance activities will be addressed when certification is made for the new ACOE permit for maintenance activities at Cargill's Solar Salt Systems. The new ACOE maintenance permit is anticipated to be issued in 2009.

CEQA Compliance: The Cargill Solar Salt System Maintenance Project was previously certified under the California Environmental Quality Act (CEQA) with the preparation of the *Final Environmental Assessment* (SCH # 94023030) by the San Francisco Bay Conservation and Development Commission (BCDC), which was associated with BCDC Major Permit 4-93. On February 21, 2008, BCDC issued an extension of Major Permit 4-93 to the Applicant, authorizing ongoing maintenance activities until February 15, 2009. By issuing an extension of Major Permit 4-93, BCDC also extended the approval of the previously prepared Environmental Assessment for the Project.

Certification and General Waste Discharge Requirements: I hereby issue an order certifying that any discharge from the referenced Project will comply with the applicable provisions of sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, and with other applicable requirements of State law. This discharge is also regulated under State Water Resources Control Board Order No. 2003 - 0017 - DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification" which requires compliance with all conditions of this Water Quality Certification. The following conditions are associated with this certification:

1. No debris, rubbish, creosote-treated wood, soil, silt, sand, cement, concrete, or washings thereof, or other construction related materials or wastes, oil or petroleum products or other organic or earthen material shall be allowed to enter into, or be placed where it may

be washed by rainfall or runoff into waters of the State. Any of these materials placed within or where they may enter waters of the State by the Applicant or any party working under contract, or with the permission of the Applicant shall be removed immediately. When construction is completed, any excess material shall be removed from the work area and any areas adjacent to the work area where such material may be washed into waters of the State. During construction, the contractor shall not dump any litter or construction debris within the riparian/stream zone. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site;

2. The Applicant shall adhere to the conditions of the CWA Section 404 Nationwide Permit No. 3 (*Maintenance*), and No. 18 (*Minor Discharge*) issued by the ACOE (File No. 2008-00146S);

3. The Applicant shall adhere to the Terms and Conditions and the Reasonable and Prudent Measures in the Biological Opinion, Endangered Species Formal Consultation on Cargill Salt Division Solar Salt Production Activities, South San Francisco Bay, San Mateo, Alameda, and Santa Clara County, California, issued for the Project by the U.S. Fish and Wildlife Service (USFWS) (Reference No. 1-1-95-F-47);

4. The Applicant shall adhere to the Essential Fish Habitat (EFH) Conservation Recommendations in the Programmatic Consultation provided by the National Marine Fisheries Service (NOAA Fisheries) on December 21, 2007, pursuant to the EFH provisions of the Magnuson-Stevens Fishery Conservation Management Act for eight categories of actions regularly permitted by the ACOE (Reference No. 2007/07472:KAS);

5. The Applicant shall perform the maintenance and system improvement work as described in *Cargill Salt's Maintenance Work Plan Report, 2008- 2010* (Cargill Salt, April 2008) (See Attachment 1) and in Attachment 2, and in conformance with the appropriate Best Management Practices in Attachment 3;

6. No later than May 1 of each year, the Applicant shall provide the Water Board with annual written notification of the projects proposed for the upcoming construction season. Notification will be presented in the table format used to summarize the proposed work in Attachment 1 to this certification, including the following site-specific information for each project: ponds in which the work is to be performed, the activity or function to be performed, the duration of the activity, ACOE and BCDC activity classifications, and the size and scope of the proposed projects;

7. No later than December 31 of each year, the Applicant shall provide the Water Board with an annual maintenance completion report for the completed construction season. This report may use the same table format as the table of proposed work in Attachment 1 to this certification;

8. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to Section 13330 of the California Water Code (CWC) and Section 3867 of Title 23 of the California Code of Regulations (23 CCR);

9. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR Subsection 3855(b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought; and,

10. Certification is conditioned upon total payment of the full fee required in State regulations (23 CCR Section 3833). Payment in full was received June 2, 2008.

This certification applies to the Project as proposed in the application materials and designs referenced above in the conditions of certification. Be advised that failure to implement the Project and habitat mitigation and monitoring plan in conformance with this certification is a violation of this water quality certification. Also, any violation of water quality certification conditions is a violation of State law and subject to administrative civil liability pursuant to California Water Code (CWC) Section 13350. Failure to meet any condition of a certification may subject the Applicant to civil liability imposed by the Water Board to a maximum of $10,000 per day of violation or $10 for each gallon of waste discharged in violation of this action. Any requirement for a report made as a condition to this action (i.e., conditions 6 and 7) is a formal requirement pursuant to CWC Section 13267, and failure or refusal to provide, or falsification of such required report is subject to civil liability as described in CWC Section 13268. Should new information come to our attention that indicates a water quality problem with this Project, the Water Board may issue Waste Discharge Requirements.

Please contact Brian Wines of my staff at (510) 622-5680 or bwines@waterboards.ca.gov if you have any questions. All future correspondence regarding this Project should reference the Site Number indicated at the top of this letter.

Sincerely,

Shin-Roei Lee acting for

Bruce H. Wolfe
Executive Officer

Attachments:
1. Cargill Salt Work Plan, 2008 – September 2010
2. Additional Levee Repair Work
3. Major Maintenance Activities and Best Management Practices and Special Conditions to Minimize Adverse Impacts to Endangered Species and Sensitive Natural Resources

cc: SWRCB-DWQ, Bill Orme (borme@waterboards.ca.gov)
USACE, San Francisco District, Attn: Attn: Regulatory Branch, Regulatory Branch, 1455 Market Street, San Francisco, CA 94103–1398 (ACOE File No: 2008-00146S) (paula.c.gill@usace.army.mil, jane.m.hicks@usace.army.mil, mark.r.d'avignon@usace.army.mil, peter.s.straub@usace.army.mil)
USFWS, Eric Mruz (eric_mruz@fws.gov)
CDFG, John Krause (jkraus@dfg.ca.gov)
BCDC, Max Delaney (maxd@bcdc.ca.gov)
U.S. EPA, David Smith, WTR-8. (smith.davidw@epa.gov)

Attachment 1

Cargill Salt Work Plan 2008 – September 2010

THE MALLARD

CARGILL SALT'S MAINTENANCE WORK PLAN REPORT

2008 – 2010

April 2008

SUPPORTING TEXT

June 2008 – May 2010 Cargill Solar Salt Maintenance and System Improvement Work

April 2008

This is the work plan for June 2008 – May 2010 for Cargill's Solar Salt System. New construction and maintenance tasks necessary for the continuing operation of the solar ponds complexes in specific areas are discussed as follows:

Alviso Pond System (A22 – A23):

These ponds are now fully operated and managed by the staff at the Don Edwards San Francisco Bay National Wildlife Refuge. Bay waters have been successfully circulated through the pond complexes as envisioned by the Initial Stewardship Plan (ISP). The only two ponds left in the Alviso Salt Pond Complex under Cargill's operational control are ponds A22 and A23, of which, work on the cross levee between Ponds A22 and A23 is being proposed for this coming period. Both A22 and A23 have been part of the refuge since 1979. Full fee ownership was transferred to the Federal Government in March of 2003.

The refuge staff has requested that Cargill's dredge, the Mallard, be scheduled for a return to their Alviso Pond Complex in September/October 2008 for routine levee maintenance, and if that work is scheduled, it will be reported in conjunction with the Refuge's Maintenance Report and performed under the Refuge's Maintenance Permit.

Baumberg – Pond 3C:

Pond 3C remains in the ownership of Cargill and is not part of the South Bay Salt Pond Restoration Project. Cargill has taken the lead, on behalf of the California Department of Fish and Game, to install infrastructure that allows DFG to operate this pond complex without the need for Cargill's Pond 3C. DFG is still operating Pond 3C with the rest of the ponds in the complex. Routine levee maintenance is being proposed for Pond 3C. Details of the work are provided in the accompanying matrix of this report.

Redwood City Pond System/West Bay Ponds:

The West Bay Ponds on the northwestern end of the Dumbarton Bridge were conveyed to the Federal Government in 2003. Cargill has continued to operate and maintain these ponds upon the request of the Federal Government, but Cargill plans to transfer these responsibilities in the near future. Routine levee maintenance is being proposed/recommended for this system. The Refuge Manager will make final decision for implementation of these activities. Significant tasks in the West Bay Ponds are:

SUPPORTING TEXT

June 2008 – May 2010 Cargill Solar Salt Maintenance and System Improvement Work
April 2008

1. Pond SF2, located southeast of the Dumbarton Bridge and part of the West Bay Ponds, was transferred to the Federal Government on June 25, 2007. Cargill retained approximately 2 acres of this 254-acre pond for operations and maintenance purposes of the Transbay Pipeline (see enclosed map). A donut levee was recently constructed within the pond to segregate this 2-acre section from the remaining pond. This newly constructed levee will require additional build up after the muds have cured. This work is shown on the matrix and will be performed with land-based equipment.

Redwood City Plant Site:

Routine levee maintenance at the plant site will occur during this time frame. Details for these projects are provided in the accompanying matrix of this report.

Newark Plant 1:

Levee maintenance and other routine activities will occur in Plant 1 during this time frame. Significant tasks in Plant 1 are:

1. The Mallard, Cargill's dredge, is currently in this pond system performing routine levee maintenance. Mud is being dredged from within the pond and placed on top of levees or the inside toe/beach of levees as needed. Please refer to the matrix and the enclosed map for details.

2. Repair/replace thirty-six inch diameter pipe and gate between Ponds 2 and 3.

3. Repair/replace thirty-six inch diameter pipe and gate between Ponds 3A and 4A.

4. Exit dredge lock at Pond 2A in September/October.

5. Cut five (5) 12-foot gaps in cross levee of CP-3 and Old Beard Creek using Land-based equipment. This will allow for a more efficient flow of brines between CP-3 and CP-2.

SUPPORTING TEXT

June 2008 – May 2010 Cargill Solar Salt Maintenance and System Improvement Work

April 2008

Newark Plant 2:

Levee maintenance and other routine activities will occur in Plant 2 during this time frame. Significant tasks in Plant 2 are:

1. Repair/replace thirty-six inch diameter pipe and gate between Ponds 2 and 3.
2. Plug old siphon between Ponds 5 and 6 with earthen plugs.
3. Replace Mowry Intake Pump discharge pipes.
4. Clean and remove sediment build up with land-based equipment in front of siphon between Pond 3 to Pond 4.
5. Build up low areas on top of levee with land-based equipment – Pond 6.
6. Mallard to enter dredge lock at CP-1 approximately October 2009
7. Rip Rap approximately 600 lf of inside levee on CP-5.
8. Build up low areas of levee around Desalting Pond 11.

Plant 2 (Tentative Schedule if Cargill's Mallard does not perform maintenance for USFWS in Alviso Ponds):

1. Enter dredge lock at Pond 4 in October/November 2008.
2. Levee topping and/or beaching in Pond 3.
3. Levee topping and/or beaching in Pond 4
4. Levee topping and/or beaching in Pond 5
5. Levee topping and/or beaching in Pond 6

ALVISO POND SYSTEM (USFWS REFUGE)							
Task No.	Ponds Involved	Activity1 / Function	Duration of Activity	COE2	BCDC2	Size/Scope	Comments
1	A22 Cross-Levee	General Levee Maintenance	Coordinate With Refuge	2a	2a	2,500 lf	Repair levee with land-based equipment. (Cross levee A22-A23) As needed.
2	A-22	Other work	Ongoing	2a	2e		Cut gap or construct gate box in cross levee to allow bay water into A-22 from A-23

*** Proposed activities as recommendations. Final decision for implementation of approved to be made by Refuge Manager, Don Edwards San Francisco Bay National Wildlife Refuge**

[1]All routine grading of levee top to provide discing and rip-rapping are routine, preventative maintenance activities unless otherwise identified.

[2]Many activities identified in the work plan are outside COE/BCDC authority/jurisdiction. These are identified in the workplan for completeness and information only. Where there is tentative agreement between COE/BCDC and Cargill that these activities are outside the jurisdiction area, these areas are marked "N/A." The Corps and BCDC will make the final determination.

BAUMBERG							
Task No.	Ponds Involved	Activity[1] / Function	Duration of Activity	COE[2]	BCDC[2]	Size/Scope	Comments
3	3C	Grading/Levee Road Maint.	Ongoing	N/A	2b		Routine grading of levee top to provide vehicle access. Where present, grading will not occur in active WSP/seabird nesting areas.
4	3C	Close gap in levee between CP-3C & 2C	Ongoing	N/A	N/A		Existing levee gap to be closed with dirt fill and land based equipment to segregate CP-3C from CP-2C, which is operated by CDF&G.
5	3C	Remove or plug pipe from CP-4C to 3C	Ongoing	N/A	N/A	Earth plugs at each end	Plug existing pipe from CP-4C to 3C, CP-4C is operated by CDF&G.

[1]All routine grading of levee top to provide discing and rip-rapping are routine, preventative maintenance activities unless otherwise identified.
[2]Many activities identified in the work plan are outside COE/BCDC authority/jurisdiction. These are identified in the workplan for completeness and information only. Where there is tentative agreement between COE/BCDC and Cargill that these activities are outside the jurisdiction area, these areas are marked "N/A." The Corps and BCDC will make the final determination.

REDWOOD CITY POND SYSTEM							
USFWS REFUGE							
Task No.	Ponds Involved	Activity[1] / Function	Duration of Activity	COE[2]	BCDC[2]	Size/Scope	Comments
6	1, 2, 3, 4, 5, S5	Grading	Ongoing	N/A	2b		Routine grading of levee top to provide vehicle access. Where present, grading will not occur in active WSP/seabird nesting areas.
7	1	Rip-rap	Ongoing	1e	1c	2,270 lf, 1,300 cy	Maintenance of existing rip-rap areas.
8	2	Levee Maintenance	Ongoing	2a	2a	1,200 lf	Build up low areas as needed with land based equipment.
9	4	Rip-rap	Ongoing	1e	2a	100 lf, 120 cy	Maintenance of existing rip-rap areas.

***Proposed activities as recommendations. Final decision for implementation of approved to be made by Refuge Manager, Don Edwards San Francisco Bay National Wildlife Refuge**

CARGILL							
10	SF2	To transfer brines from Redwood City to Plant 1 or Plant 2	Ongoing	N/A	2c	20' x 20' Pad	Relocate portable pump pad to return brines to Plan 1 or Plant 2 Newark.
11	SF2	General levee	Ongoing	9	j	290' x 345' x	Cap donut levee with import fill to hold brines from

[1]All routine grading of levee top to provide discing and rip-rapping are routine, preventative maintenance activities unless otherwise identified.
[2]Many activities identified in the work plan are outside COE/BCDC authority/jurisdiction. These are identified in the workplan for completeness and information only. Where there is tentative agreement between COE/BCDC and Cargill that these activities are outside the jurisdiction area, these areas are marked "N/A." The Corps and BCDC will make the final determination.

REDWOOD CITY PLANT SITE							
Task No.	Ponds Involved	Activity[1] / Function	Duration of Activity	COE[2]	BCDC[2]	Size/Scope	Comments
12	7A, 7B, 7C, 8E, 8W, 9, 9A, & 10	Grading/Levee Road Maint.	Ongoing	N/A	2b		Routine grading of levee top to provide vehicle access. Where present, grading will not occur in active WSP/seabird nesting areas.
13	PP-7B	General Levee Maintenance	Ongoing	2a	2a	1,000 1f	Build up low areas as needed with land based equipment.
14	PP-7C	General Levee Maintenance	Ongoing	2a	2a	1,200 1f	Build up low areas as needed with land based equipment.

[1]All routine grading of levee top to provide discing and rip-rapping are routine, preventative maintenance activities unless otherwise identified.

[2]Many activities identified in the work plan are outside COE/BCDC authority/jurisdiction. These are identified in the workplan for completeness and information only. Where there is tentative agreement between COE/BCDC and Cargill that these activities are outside the jurisdiction area, these areas are marked "N/A." The Corps and BCDC will make the final determination.

NEWARK PLANT 1							
Task No.	Ponds Involved	Activity[1] / Function	Duration of Activity	COE[2]	BCDC[2]	Size/Scope	Comments
15	1-9, 1A - 4A, PP1	Grading	Ongoing	N/A	2b		Routine grading of levee top to provide vehicle access. If present, grading will not occur in active WSP/seabird nesting areas.
16	1A	Levee topping or beaching "Mallard"	Ongoing Apr 08 thru Sep 08	2a	2d		Top and beach with dredged muds (cross levees).
17	1A	Plug Cal-Hill transfer pump discharge pipe	TBA				Plug Cal-Hill transfer pump discharge pipeline.
18	2A	Levee topping or beaching "Mallard"	Ongoing Apr 08 thru Sep 08	2a	2d		Top and beach with dredged muds (cross levees).
19	2A	Levee Beaching "Mallard"	Ongoing Apr 08 thru Sep 08		2d		Beach with dredged muds (bayshore).
20	2A	Levee Beaching "Mallard"	Ongoing Apr 08 thru Sep 08	2a	2d		Beach with dredged muds (cross levee 2A - 5).
21	2A	Levee Beaching "Mallard"	Ongoing Apr 08 thru Sep 08	2a	2d		Beach with dredged muds (cross levee 2A - 7).
22	2A	Enter dredge lock	Apr-08	2d	1a		Enter dredge lock for maintenance on system levees.
23	2A	Exit dredge lock	Sep/Oct 08	2d	1a		Exit dredge lock.
24	3	General Levee maintenance	Ongoing	2a	2a	3,500 lf 3,000 cy	Build up areas that show signs of erosion with land-based equipment.
25	3	Other Work	Ongoing	1a	2a		Repair or replace 36" pipe and gate (3 to 2).

NEWARK PLANT 1							
Task No.	Ponds Involved	Activity[1] / Function	Duration of Activity	COE[2]	BCDC[2]	Size/Scope	Comments

[1]All routine grading of levee top to provide discing and rip-rapping are routine, preventative maintenance activities unless otherwise identified.

[2]Many activities identified in the work plan are outside COE/BCDC authority/jurisdiction. These are identified in the workplan for completeness and information only. Where there is tentative agreement between COE/BCDC and Cargill that these activities are outside the jurisdiction area, these areas are marked "N/A." The Corps and BCDC will make the final determination.

NEWARK PLANT 1							
Task No.	Ponds Involved	Activity[1] / Function	Duration of Activity	COE[2]	BCDC[2]	Size/Scope	Comments
26	3	Other Work	Ongoing	2a	2e	5 locations	Cut five (5) 12' lf gap in cross levee of CP-3 and Old Beard Creek using land-based equipment.
27	3A	Levee topping or beaching "Mallard"	Ongoing Apr 08 thru Sep 08	2a	2d		Top and beach with dredged muds (cross levees).
28	3A	Routine maintenance	Ongoing	1a	2a		Repair or replace 36" pipe and gate (3A to 4A).
29	4A	Levee topping or beaching "Mallard"	Ongoing Apr 08 thru Sep 08	2a	2d		Top and beach with dredged muds (cross levees).
30	5	Levee Beaching "Mallard"	Ongoing Apr 08 thru Sep 08	2a	2d		Beach with dredged muds (bayshore).
31	7	Levee Beaching "Mallard"	Ongoing Apr 08 thru Sep 08	2a	2d		Beach with dredged muds (cross levee 7 / 4A).
32	8	Levee Beaching "Mallard"	Ongoing Apr 08 thru Sep 08	2a	2d		Beach with dredged muds (cross levee 8 / 4B).
33	9	Levee Beaching "Mallard"	Ongoing Apr 08 thru Sep 08	2a	2d		Beach with dredged muds (cross levee 9 / 4B).
34	9, 4B	Place rock on road to raise due to erosion and	Ongoing	N/A	2a	240 lf, 340 cy	Allow all weather access to Big Dan Pump.

[1]All routine grading of levee top to provide discing and rip-rapping are routine, preventative maintenance activities unless otherwise identified.

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NEWARK PLANT 2							
Task No.	Ponds Involved	Activity[1] / Function	Duration of Activity	COE[2]	BCDC[2]	Size/Scope	Comments
35	1 - 13	Grading	Ongoing	N/A	2b		Routine grading of levee top to provide vehicle access. If present, grading will not occur in active WSP/seabird nesting areas.
36	1	Enter dredge lock	Oct 09	2d	1a		Enter dredge lock for maintenance on system levees
37	1	Levee Topping or Beaching "Mallard"	Ongoing Feb 10 thru Sep 10	2a	2d		Top and beach with dredged muds (Bayshore)
38	1	Levee Topping or Beaching	Ongoing Feb 10 thru Sep 10	2a	2d		Top and beach with dredged muds (cross levee CP-1/2)
39	1	Exit dredge lock	Sept/Oct 10	2d	1a		Exit dredge lock.
40	1	Levee Topping or Beaching "Mallard"	Ongoing Feb 10 thru Sep 10	2d	2d		Top and beach with dredged muds (cross levee CP-1/3)
41	2	Routine maintenance	Ongoing	1a	2a		Repair or replace 36" screw gate (2 to 3).
42	2	Levee Topping or Beaching	Ongoing Feb 10 thru Sep 10	2a	2d		Top and beach with dredged muds (Bayshore)
43	2	Levee Topping or Beaching	Ongoing Feb 10 thru Sep 10	2a	2d		Top and beach with dredged muds (cross levee CP-2/3)
44	3	General levee maintenance	Ongoing	2a	2a	1000 lf	Build up low areas with land based equipment.

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NEWARK PLANT 2							
Task No.	Ponds Involved	Activity[1] / Function	Duration of Activity	COE[2]	BCDC[2]	Size/Scope	Comments
46	3	Levee Topping or Beaching	Ongoing Feb 10 thru Sep 10	2a	2d		Top and beach with dredged muds (Bayshore)
47	3	Dirt fill with rip-rap trucks (inside)	Ongoing	N/A	.	50 cy / 1600 lf	Dirt fill placed with trucks during rip-rap operation (typical for all similar entries).
48	3	General levee maintenance	Ongoing	2a	2a	1000 lf	Build up low areas as needed with land-based equipment.
49	3	Rip-rap (Inside)	Ongoing	1e	2a	1600 lf, 1800 cy	Maintenance of existing rip-rap areas.
50	4	Other work	Ongoing	1d	2b		Clean and remove sediment build-up in front of siphon as needed.
51	5	General levee maintenance	Ongoing	2a	2a	400 lf 1000 cy	Build up levee low spot with land based equipment at CP - 5 / 6 cut.
52	5	Will abandon. Existing siphon in place.	Ongoing	N/A	N/A	Earth plugs at each end of siphon	Plug old siphon from CP-5 to 6. Dredge by-pass previously permitted and constructed eliminated need for siphon.
53	5	General levee maintenance	Ongoing	2a	2a		Key levee by siphon (5 to 6) as needed.
54	5	Rip-rap (Inside)	Ongoing	1e	2a	600 lf, 500 cy	Maintenance of existing rip-rap areas.

[1]All routine grading of levee top to provide discing and rip-rapping are routine, preventative maintenance activities unless otherwise identified.

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NEWARK PLANT 2							
Task No.	Ponds Involved	Activity[1] / Function	Duration of Activity	COE[2]	BCDC[2]	Size/Scope	Comments
55	6	General levee maintenance	Ongoing	2a	2a	1000 lf	Build up low areas with land based equipment.
56	6	Levee Topping or Beaching	Ongoing Feb 10 thru Sep 10	2a	2d		Top and bech with dredged muds (Bayshore)
57	6	General levee maintenance	Ongoing	N/A	2a	3200 lf	Splash berm with land-based equipment.
58	6	General levee maintenance	Ongoing	2a	2a	4400 lf	Spot key levee as needed.
59	6	Rip-rap (inside)	Ongoing	1e	2a	1000 lf 1500 cy	Maintenance of existing rip-rap areas.
60	PP7	Routine maintenance	Ongoing	1a	2a		Repair WWD to Cp3 discharge pipe supports.
61	PP7	General levee maintenance	Ongoing	2a	2a	3000 lf	Build up areas of cross levee with land based equipment.
62	PP7	Place rock on roads	Ongoing	N/A	N/A		Place rock on road for all weather access to Mowry siphon pump.
63	PP7	General levee maintenance	Ongoing	N/A	2a	10000 lf	Repair eroded areas and build up low areas of levee as needed. Work will be done using land based equipment.
64	PP7	Rip-rap (Inside)	Ongoing	1e	2a	800 lf 600 cy	Maintenance of existing rip-rap areas.

[1]All routine grading of levee top to provide discing and rip-rapping are routine, preventative maintenance activities unless otherwise identified.

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NEWARK PLANT 2							
Task No.	Ponds Involved	Activity[1] / Function	Duration of Activity	COE[2]	BCDC[2]	Size/Scope	Comments
65	PP8	Place rock on roads	Ongoing	N/A	N/A		Place rock on road for all weather access to Mowry siphon pump/wash water ditch pump.
66	PP8	General levee maintenance	Ongoing	2a	2a	1400 lf	Repair eroded areas on levee using land-based equipment (WWD - PP8).
67	PP8	Rip-rap (Inside)	Ongoing	1e	1c	22,000 lf 8,000 cy	Rip-rap inside toe of levee. The use of filter fabric will be used under rip-rap. (Production / Quality / Improvements)
68	PP8, Crystallizer 26	General levee maintenance	As needed, based upon regular inspections.	2a	2a	3000 lf	Improve levee containing mud stockpile. Coordinate with Refuge.
69	Crystallizer 26	Enter dredge lock	Sep 08 thru Feb 09	2d	1a		Enter dredge lock for maintenance on work on dredge.
70	10 De-Salting Pond	General levee maintenance	Ongoing	N/A	2a	14,000 lf	Build up levee with land based equipment.
71	11 De-Salting Pond	General levee maintenance	Ongoing	N/A	2a	14,000 lf	Build up levee with land based equipment.
72	11 De-Salting Pond	General levee maintenance	Ongoing	N/A	2a	8,000 lf	Build up levee with land based equipment.
73	12 Bittern Pond	General levee maintenance	Ongoing	N/A	2a	14,000 lf	Build up levee with land based equipment.
74	12 Bittern Pond	General levee maintenance	Ongoing	2a	2a	7000 lf	Compact internal core of levee as needed.

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NEWARK PLANT 2							
Task No.	Ponds Involved	Activity[1] / Function	Duration of Activity	COE[2]	BCDC[2]	Size/Scope	Comments
75	12 Bittern Pond	Dirt fill with rip-rap trucks	Ongoing	N/A	2a	3000 cy	Dirt fill placed with Cargill trucks to build up levee low spots.
76	13 Bittern Pond	Rip-rap (Inside)	Ongoing	1e	2a	3000 lf 1540 cy	Maintenance of exsisting rip-rap areas.
77	13 Bittern Pond	Dirt fill with rip-rap trucks	Ongoing	N/A	2a	1600 cy	Dirt fill placed with Cargill trucks during rip rap operations (typical for all similar entries).
78	13 Bittern Pond	General levee maintenance	Ongoing	2a	2a	10,000 lf	Compact internal core of levee as needed.
79	13 Bittern Pond	General levee maintenance	Ongoing	N/A	2a	4,000 lf	Build splash berm along inside of levee with land based equipment.
80	FMC1- FMC6	Grading	Ongoing	N/A	2b		Routine grading of levee top to provide vehicle access. Where present, grading will not occur in active WSP/seabird nesting areas.
81	FMC pond area	Improve storage capacity	Ongoing	1a	2b	40 sq ft	Construct new pump platform at western end of deep storage ditch. Replaces old platform. (System improvements)

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NEWARK PLANT 2 - TENTATIVE							
Task No.	Ponds Involved	Activity[1] / Function	Duration of Activity	COE[2]	BCDC[2]	Size/Scope	Comments
82	3	Levee Topping or Beaching "Mallard"	Ongoing Oct / Nov 08 thru Feb 10	2a	2d		Top and beach with dredged muds (Bayshore).
83	3	Levee Topping or Beaching "Mallard"	Ongoing Oct / Nov 08 thru Feb 10	2a	2d		Top and beach with dredged muds (cross levee).
84	4	Enter Dredge Lock	Oct or Nov 08	2d	1a		Enter dredge lock for maintenance on system levees.
85	4	Levee Topping or Beaching "Mallard"	Ongoing Oct / Nov 08 thru Feb 10	2a	2d		Top and beach with dredged muds (Bayshore).
86	4	Exit dredge lock	Feb 10	2d	1a		Exit dredge lock.
87	5	Levee Topping or Beaching "Mallard"	Ongoing Oct / Nov 08 thru Feb 10	2a	2d		Top and beach with dredged muds (outside).
88	5	Levee Topping or Beaching "Mallard"	Ongoing Oct / Nov 08 thru Feb 10	2a	2d		Top and beach with dredged muds (cross levee).
89	6	Levee Topping or Beaching "Mallard"	Ongoing Oct / Nov 08 thru Feb 10	2a	2d		Top and beach with dredged muds (outside).

***NOTE:** If Cargill's Mallard is not able to perform levee maintenance for USFWS in the Alviso Ponds, Cargill will perform this work

[1]All routine grading of levee top to provide discing and rip-rapping are routine, preventative maintenance activities unless otherwise identified.
[2]Many activities identified in the work plan are outside COE/BCDC authority/jurisdiction. These are identified in the workplan for completeness and information only. Where there is tentative agreement between COE/BCDC and Cargill that these activities are outside the jurisdiction area, these areas are marked "N/A." The Corps and BCDC will make the final determination.

11-30-95

DEPARTMENT OF THE ARMY PERMIT

Permittee: Cargill Salt Division

Permit No. 19009S98

Issuing Office: Department of the Army
San Francisco District
211 Main Street
San Francisco, California 94105-1905

The District Engineer, U.S. Army Corps of Engineers (Corps), San Francisco District, hereby issues a Department of the Army permit for certain structures and work occurring in or affecting navigable waters of the United States and the discharge of dredged or fill material into waters of the United States, pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344).

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the Corps of Engineers, San Francisco District.

Project Purpose: To sustain operation and production of the solar salt facilities in the south San Francisco Bay.

Project Location: Activities described below will occur in San Francisco Bay and various sloughs and creeks in the cities of Hayward, Union City, Fremont, Newark, San Jose, Sunnyvale, Mountain View and Redwood City, in Alameda, Santa Clara and San Mateo Counties respectively, California.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: Activities including operation, repair, and new construction associated with the production of solar salt in the southern portion of San Francisco Bay.

The following activities would be covered under this permit.

1. Repair, replacement and servicing of existing facilities[1]. These will not require Corps of Engineers specific approval as described in 2., below.

a) Repair and replacement of existing bay intake structures, brine control structures, and related facilities such as pumps, gates, pipelines, siphons, open channels and culverts. Removal of silt and algae. Excavated material shall be placed in an identified upland area unless specified otherwise in the advanced notification.

b) Excavating, clearing and retrenching of existing intake structures and brine conveying ditches so long as the existing configuration is not altered substantially. Excavated material shall be disposed onto levee tops above the plane of the high tide, or hauled off-site to a non-jurisdictional area.

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[1]. Some of the repair and replacement activities could be authorized by nationwide permit #3. For the sake of expediency and permit streamlining, they are also included here, since this permit is valid for 10 years.

c) Repair and replacement of existing bridges, bridge foundations and abutments within the network of salt pond levees.

d) Repair and replacement of other items such as existing fences, tide gates, siphons in non-tidal areas, powerlines, etc., provided such repair and maintenance does not deviate from the plans of the original facility.

e) Repair of existing authorized reaches of riprap. The authorized riprap areas are designed to have approximately 4:1 slope. If additional work would exceed the existing reach by 10 linear feet, then the proposed design should be submitted in accordance with the procedures for new work in the riprap section 2 h) below.

f) Spot repairs and rehabilitation of crystallizer beds. This work will be accomplished with land based equipment.

2. Ongoing and new work:

The following activities require site specific review and approval by the Corps of Engineers in consultation with the U.S. Fish and Wildlife Service (USFWS), the U.S. Environmental Protection Agency (USEPA), the California Department of Fish and Game (CDFG), the San Francisco Bay Conservation and Development Commission (BCDC), and the San Francisco Bay Regional Water Quality Control Board (RWQCB), (all collectively referred to as "the Agencies"), pursuant to the notification procedure described in special condition 3, and in accordance with the Best Management Practices (BMPs) referenced in special condition 1 below.

a) Placement of dredged and fill material on the pond side of salt pond levees including replacement of the eroded beach below the plane of high water in the pond for the purpose of raising and fortifying the levees to prevent degradation (see Sheet 8). The material, either dredged mud from the salt pond or imported fill, will be placed along the inside and the top of the salt pond levee in accordance with the BMPs. Alternatively, where possible, slough mud from outside the ponds may be used if the dredge has sufficient reach.

b) Dredging of existing and new borrow ditches within the salt ponds for the purpose of placing the dredged material on existing levees. This will be performed most commonly by a floating clamshell dredge referred to as the Mallard, but also may be accomplished using a dragline or barge mounted dredge. A generalized cross section of a typical salt pond and levee system to be dredged is represented on Sheet 8.

c) Dredging in salt ponds to allow the floating dredge to cross a pond, with the placement of dredged material on the pond bottom along the side of the dredged channel.

d) Dredging of and placement of dredged material at 38 existing dredge locks, and at any newly constructed authorized dredge locks, to allow the Mallard to access the salt ponds. Advanced notification for these activities shall include specific quantities of material to be dredged and placed, and drawings indicating prestaked, designated areas for stockpiling, sidecasting and borrowing material. The use of dredged locks shall be specifically approved case by case, and follow the BMPs. This work includes:

i dredging an access channel about 40 to 50 feet wide and up to approximately 350 feet long through salt marsh vegetation or mud flats from a slough to a lock levee and breaching the levee;

ii if the access channel is greater than 60 feet in length, temporarily sidecasting dredged material onto a preapproved area adjacent to the access cut;

iii if the access channel is less than 70 feet, temporarily storing dredged material on the lock or salt pond levee, or designated (pre-approved) stockpile area. If between 60 and 70 feet, the material may be placed in either area;

iv breaching approximately 200 to 400 cubic yards of the dredge lock levee for dredge entry into the lock basin and placing the breached material in a designated stockpile area, and moving dry stockpiled material from past lock entries into the breached area to dam the lock;

v dredging up to approximately 2,000 cubic yards of accumulated sediment within the basin of the lock and placing the material on the inside and top of the lock levee, on adjacent salt pond levee, or into the adjacent salt pond;

vi breaching approximately 400 to 1000 cubic yards from the main salt pond levee for the dredge to enter the salt pond. Breached levee material, stockpiled from the last time the lock was accessed atop the main levee will be used to dam the breach following entry.

vii upon dredge exit, breaching and plugging levees in a similar fashion to that described above. The salt marsh muds that were excavated and sidecast in the access cut will be retrieved and placed back into to the access cut and channel, closing it behind the dredge.

viii upon dredge exit, inserting a small culvert in to the lock at an elevation that will allow appropriate circulation of high tides into the lock basin to prevent the accumulation of undesired sediments.

e) Dredging within shallow sloughs to provide up to four feet of clearance for access by the Mallard. Examples include Mowry Slough to allow the floating dredge access to dredge locks Plant 2, ponds 6 and 7, within Albrae Slough to access Plant 2 locks 3 and 4, within Ravenswood Slough to access lock RCW 3, and within Charleston Slough to access lock A1. Dredged material that cannot be placed on salt pond levees may be placed on bare mud flats following approval in accordance with the notification procedure. Some slough dredging may also be performed near dredge locks for the purpose of obtaining additional mud to bring the access cut fills to the desired elevation following exit by the Mallard (see Attachment A, 5).

f) Installation of new intake and brine control structures, new pumps, siphons, culverts, power transmission lines channels/ditches, crossings of channels and streams, in conjunction with new work, or relocation of existing structures.

g) Construction of new pumping donuts, internal coffer dams, and internal salt pond levees.

h) Placement of new riprap made up mostly of small pieces of demolition rubble (broken concrete slabs) along outboard and inboard levees as needed to fortify the slopes and prevent erosion, *so long as the permittee has adequately demonstrated that the proposed new riprap is the least damaging, practicable alternative available to prevent levee erosion.* Riprap will be placed below the high tide line and/or high pond level at a slope of about 4:1 where needed, as illustrated on Sheet 9, taking care to minimize the number of voids between the rubble that might be utilized by red foxes. Riprap placed on top of non-eroding salt marsh is not authorized.

i) Repair and replacement of siphons that cross salt marsh, sloughs and channels that would require extensive trenching and sidecasting mud.

j) Dredging and placement of bay muds into eroded areas along selected outboard levees with the purpose of encouraging the establishment and expansion of salt marsh vegetation to diffuse wave energy and prevent levee erosion. The quantities of dredged material to be moved will vary greatly depending on site specific conditions and will be included in the notification procedures. The desired height of the constructed mounds will approximate the high tide elevation (see Sheet 13).

k) Dredging a "sump" approximately 75 feet by 75 feet by 2 1/2 feet deep, in the mud flat of a slough in the immediate vicinity of a staked access cut to a dredge lock, placing the dredged mud on an adjacent levee (within reach of the Mallard). The "sump" will serve as a receptacle for excess dredged material from cutting the access channel. This authorization is for Best Management Practice 3, described in Attachment A.

Permit Conditions:

A. General Conditions:

1. The time limit for completing the work authorized ends on July 31, 2005. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

B. Special Conditions:

1. The permittee shall perform all of the activities described above in accordance with the Best Management Practices (BMPs) described in Attachment A. Any specific exceptions to these

PERMITS

STATE OF CALIFORNIA

PETE WILSON, *Governor*

SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION

THIRTY VAN NESS AVENUE, SUITE 2011
SAN FRANCISCO, CALIFORNIA 94102-6080
PHONE: (415) 557-3686

Permittees' Copy

PERMIT NO. 4-93

March 14, 1995

Levee Maintenance

Cargill Salt Division
7220 Central Avenue
Newark, California 94560-4206

ATTENTION: Robert C. Douglass,
Manager, Real Property

Ladies and Gentlemen:

On February 16, 1995, the San Francisco Bay Conservation and Development Commission, by a vote of 21 affirmative, 0 negative, and 0 abstentions, approved the resolution to which this permit is hereby issued:

I. Authorization

A. Subject to the conditions stated below, the permittee, Cargill Salt Division, is granted permission to do the following within and adjacent to the currently-used salt ponds located in portions of Alameda, Santa Clara and San Mateo Counties:

1. **In the Bay:**

   a. Use and maintain the existing 38 dredge locks in order to maintain existing salt ponds;

   b. Perform periodic maintenance dredging of the Redwood City and Napa dock area, and the Newark barge canal, with disposal of the dredged materials: (1) within a salt pond borrow ditch along the inside of salt pond levees or on top of levees; (2) at a dry land location outside the Commission's jurisdiction; (3) in the ocean; or (4) at an available in-Bay disposal site;

   c. Place riprap in the minimum amount necessary to protect existing levees;

   d. Repair docks on an in-kind, as needed basis that does not result in a significant enlargement or increase of square footage over that of the existing dock;

   e. Maintain, or replace in-kind, existing marine crossings;

   f. Provide artificial refugial cover, or floating platforms, several weeks prior to lock access, as needed to implement the Best Management Practices in Section II-D, below; and

   g. Clean out and maintain existing intake channels.

2. **In operating salt ponds:**

   a. Maintain in a serviceable condition the salt pond levees owned or controlled by the permittee by the placement of native material taken from inside salt ponds or imported material in the minimum amount necessary to repair or protect levees;

   b. Maintain, or replace in-kind, existing improvements such as pumps, pumping facilities, culverts, pipes, siphons, electrical distribution lines, tide gate structures, fences, bridges, roads on salt pond levees, walkways, bulkheads, and similar facilities;

   c. Install and use new pipes, culverts, siphons, intake structures, electrical distribution lines for the permittee's operations, and pumping facilities, all involving the minimum fill necessary;

   d. Clean out and maintain existing intake channels, tide gates, brine ditches, and pumps into salt ponds;

   e. Dispose salt pond dredged material along the inside and top of salt pond levees to maintain levee configuration;

   f. Drain and regrade interior salt ponds to continue salt production;

   g. Maintain salt operations for salt production in crystallizer beds such as grading, compaction, installing rails, etc.

   h. Provide artificial refugial cover, or floating platforms, several weeks prior to lock access, as needed to implement the Best Management Practices in Section II-D, below;

   i. Temporarily store shoreline protection materials at specific, dry land locations approved in writing by or on behalf of the Commission, for levee protection purposes; and

   j. Restore, as mitigation for the estimated 17 acres of temporal impacts caused by salt pond maintenance activities, a 34-acre segment of Salt Pond Baumberg-1 (see Exhibit A) to tidal action by constructing a new salt pond levee to create the preferred mitigation site, breaching an existing salt pond levee to facilitate transport of sediments from the Bay into the restoration site, preparing the existing salt pond for restoration to tidal salt marsh, and monitoring for ten years.

3. **Within the 100-foot shoreline band:**

   a. Maintain salt production facilities similar to those described in Sections 1 and 2, above; and

   b. Store, on a temporary basis, shoreline protection materials in certain designated areas approved in writing by or on behalf of the Commission for levee protection purposes.

B. This authority is generally pursuant to and limited by the permittee's application, but subject to the modifications required by the conditions herein.

C. The work authorized by this permit shall remain in effect until February 16, 2005, unless the terms of this authorization are changed by amendment of this permit. As provided in Special Condition II-L, below, at the conclusion of the ten-year period, the permittee may apply to the Commission for successive five-year extensions of this authorization.

Cargill Salt's - 2008-2010 Proposed Maintenance and New Work

Cargill Salt

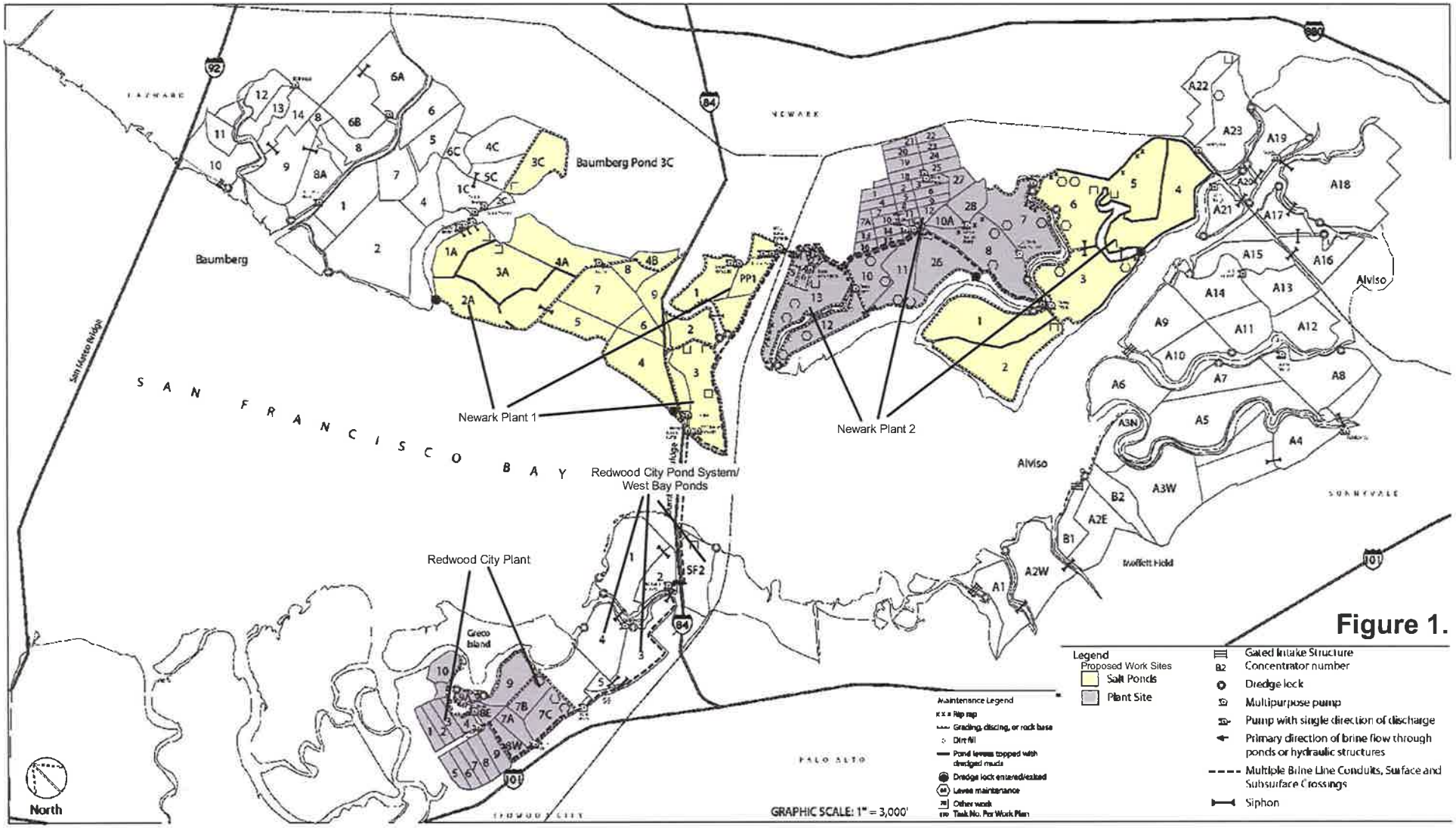
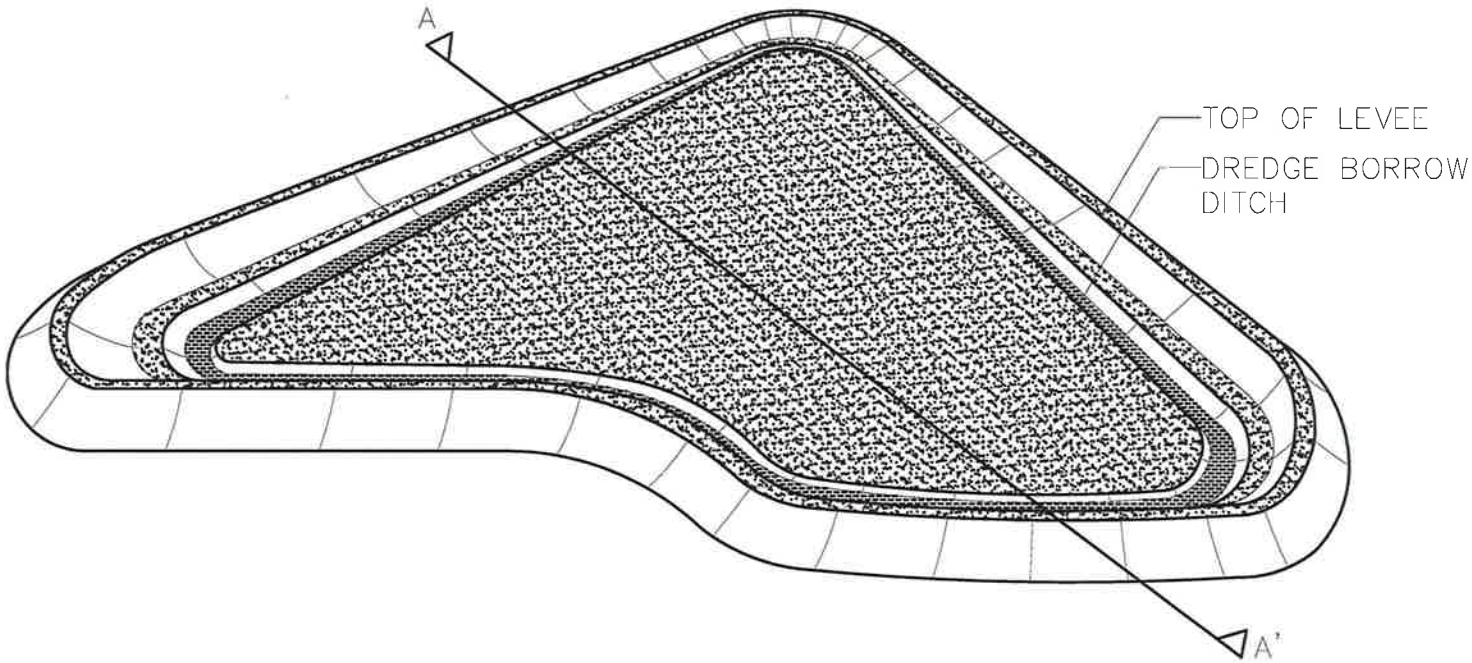


Figure 1.

g:/Archive/CK00/20000448/maps/working files/08-04-24 BW/08-04-24 Proposed Maint 2008to10 - bw-full.ai

April 2008



PURPOSE: SOLAR SALT POND OPERATIONS

SOURCE:

wra
ENVIRONMENTAL CONSULTANTS

Figure 2.
Typical Pond

SCALE: NTS

Cargill, Inc.
7220 Central Ave.
Newark, CA 94560
(510) 790-8610

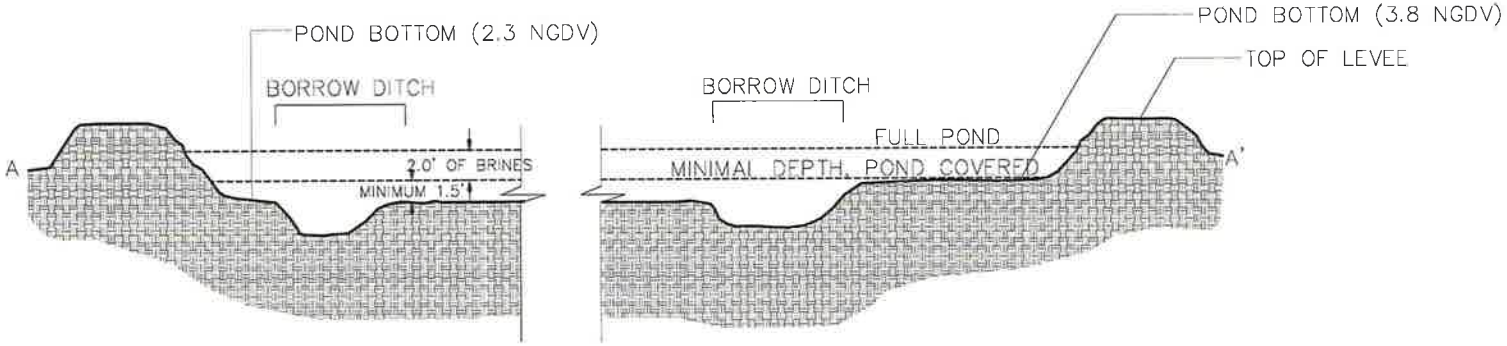
CARGILL SOLAR SALT SYSTEM

LOCATION: S. SAN FRANCISCCO BAY AREA, CALIFORNIA

COUNTY: ALAMEDA, SAN MATEO

APPLICATION BY: CARGILL, INC.

SHEET: 2 of 3



PURPOSE: SOLAR SALT POND OPERATIONS

SOURCE:

wra
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Figure 3.
Typical Pond Selection

SCALE: NTS

Cargill, Inc.
7220 Central Ave.
Newark, CA 94560
(510) 790-8610

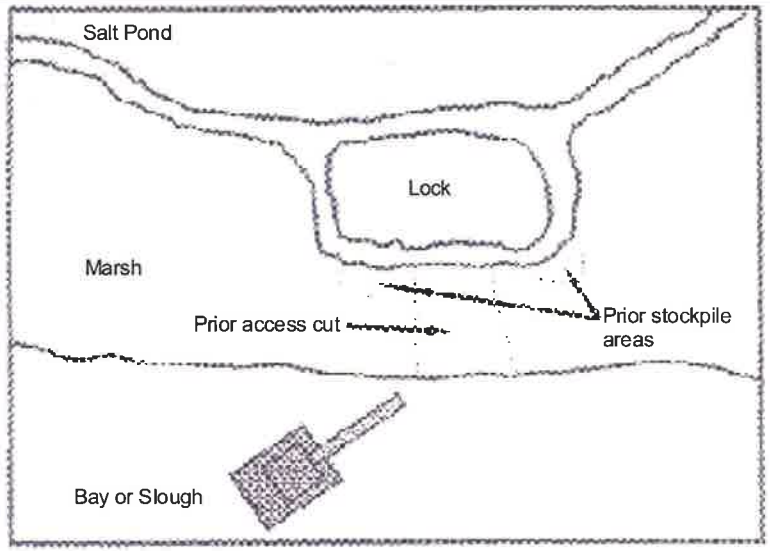
CARGILL SOLAR SALT SYSTEM

LOCATION: S. SAN FRANCISCCO BAY AREA, CALIFORNIA

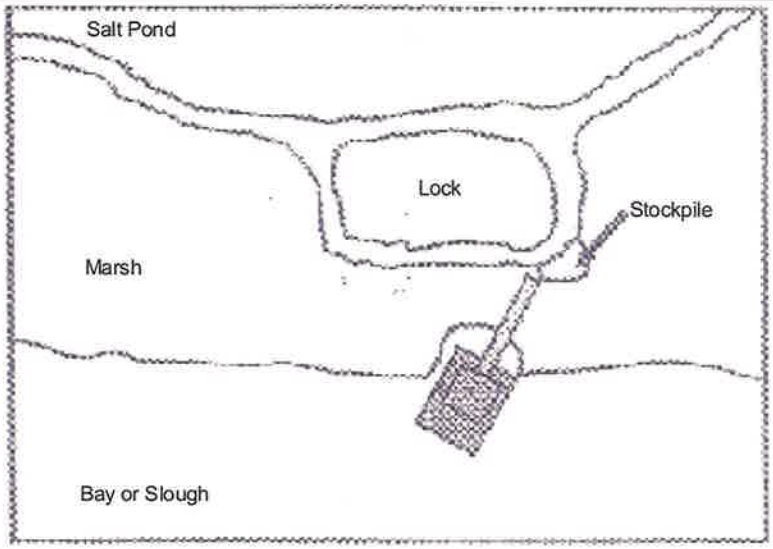
COUNTY: ALAMEDA, SAN MATEO

APPLICATION BY: CARGILL, INC.

SHEET: 3 of 3



Step 1



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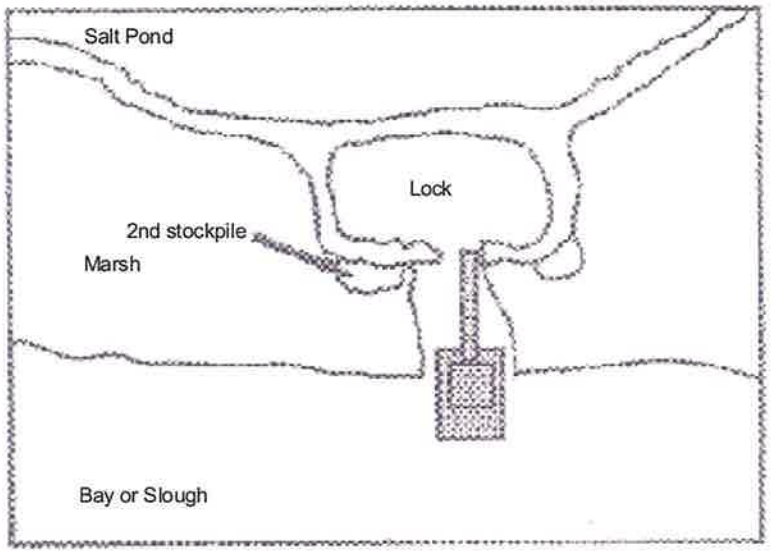

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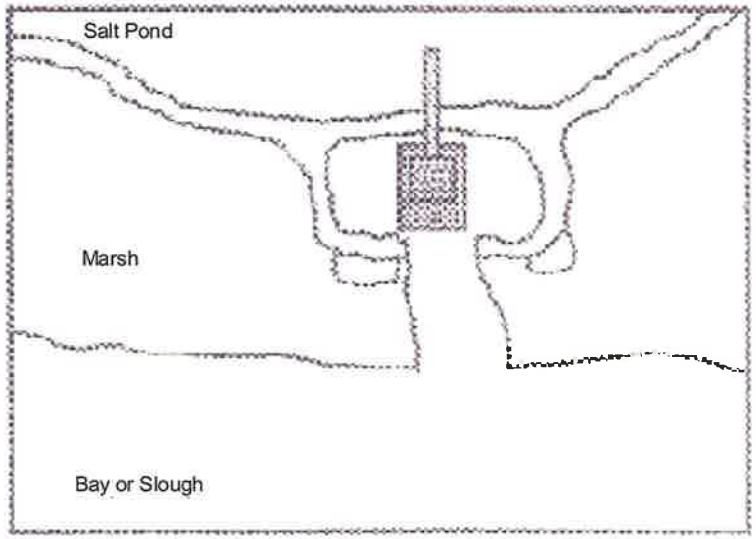

Step 4

Figure 4a (Steps 1-4). Sequential depiction of dredge access to salt pond via dredge lock. Step 1 - Dredge approaches lock from bay or slough; Step 2 - Dredge begins excavating access channel, excavated material is stored on stockpile (if access channel is greater than 70 feet, excavated material will be stored adjacent to access channel until dredge can reach stockpile area); Step 3 - Dredge completes access channel and begins removing "dam" portions of lock levee, additional excavated material is stored on 2nd stockpile; Step 4 - Dredge completes dam removal and enters lock.

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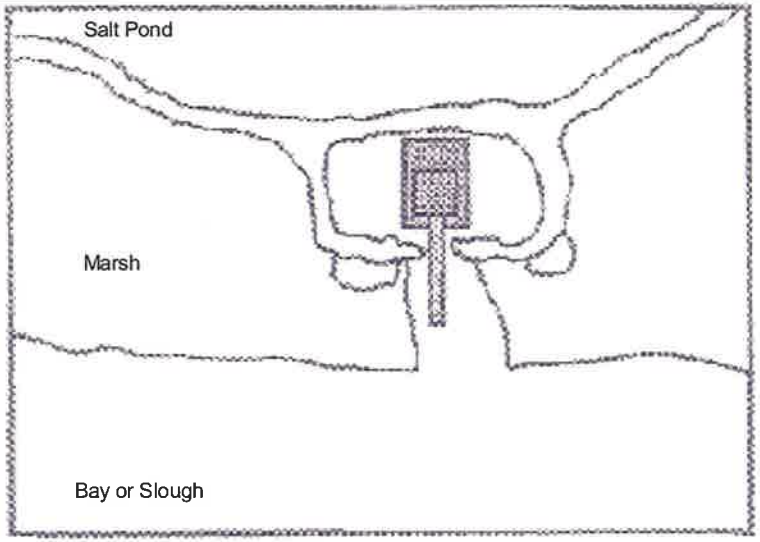
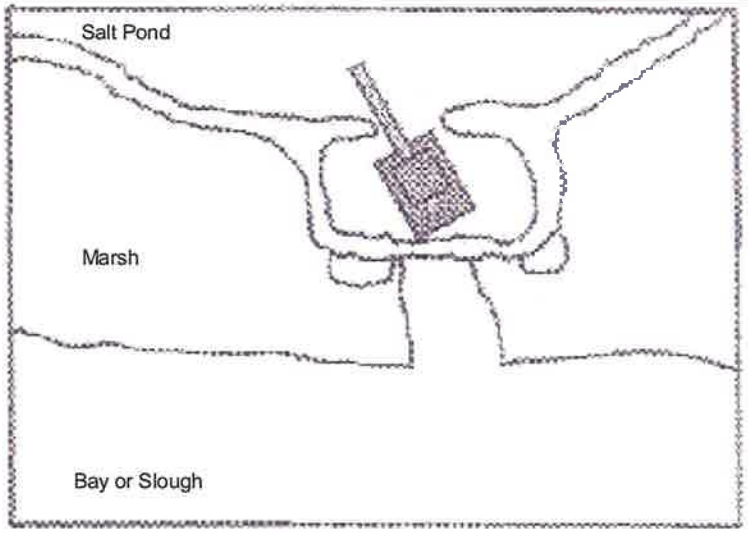


Step 5



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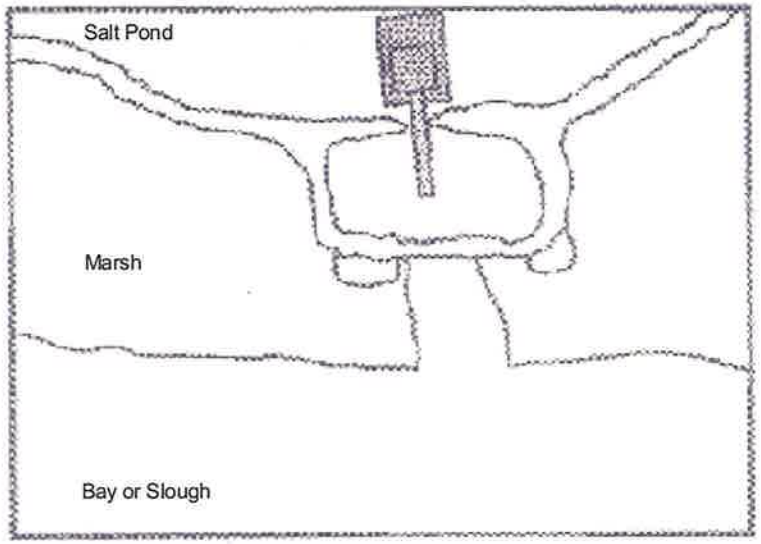
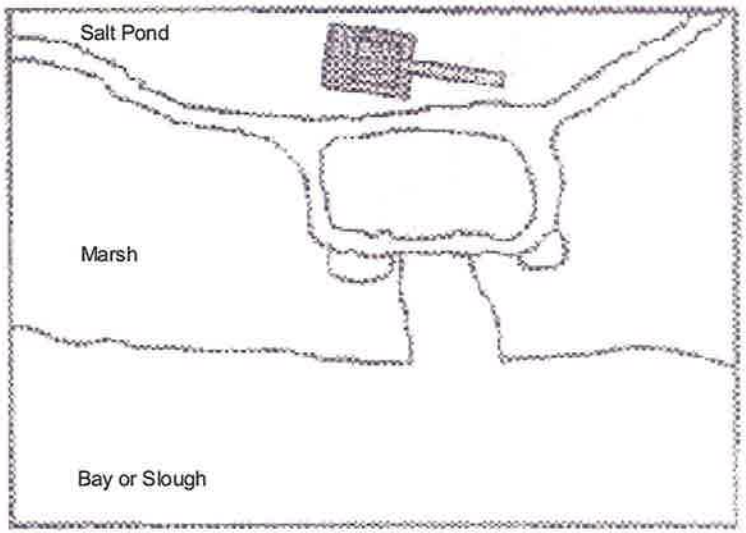


Step 7



Step 8

Figure 4b (Steps 5-8). Sequential depiction of dredge access to salt pond via dredge lock, continued. Step 5 - Dredge lock rotates 180 degrees and begins repairing dam portion of dredge lock levee; Step 6 - Dredge completes repairs to dam portion of the dredge lock levee (additional lock levee maintenance may also occur at this time), rotates 180 degrees and begins removing dam portion of salt pond levee; Step 7 - Dredge finishes removal of salt pond levee dam, enters salt pond, rotates 180degrees and begins repair of salt pond levee dam; Step 8 - Dredge completes repair of salt pond levee dam and begins salt pond levee maintenance.

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Attachment 2

Cargill 2-Year Maintenance Permit

Additional Levee Repair Work

Cargill Salt

SENT VIA EMAIL AND NEXT DAY MAIL

October 8, 2008

Brian Wines
Regional Water Quality Control Board—San Francisco Bay
1515 Clay St Suite 1400
Oakland, CA 94612

RE: Cargill 2-year maintenance permit – Cargill file: 2000.002:0 & 2000.005:0A
Corps File (2008-00146S)

Dear Mr. Wines:

Cargill has filed an application with the Corps of Engineers on May 29, 2008 and received a permit from the Corps of Engineers for the maintenance within its ponds for a period of two years. The maintenance permit requires 401 certification by the Regional Water Quality Control Board. In addition to the work described in the permit application, Cargill notified the Corps of Engineers that additional work will be required to place approximately 275 cubic yards of rock riprap along a damaged levee north of the Dumbarton Bridge. This work is urgent as the levee is exposed to wave action and is showing initial indications of erosion and failure. The Corps issued its permit to include this additional work and the NMFS considered it in their Biological Opinion.

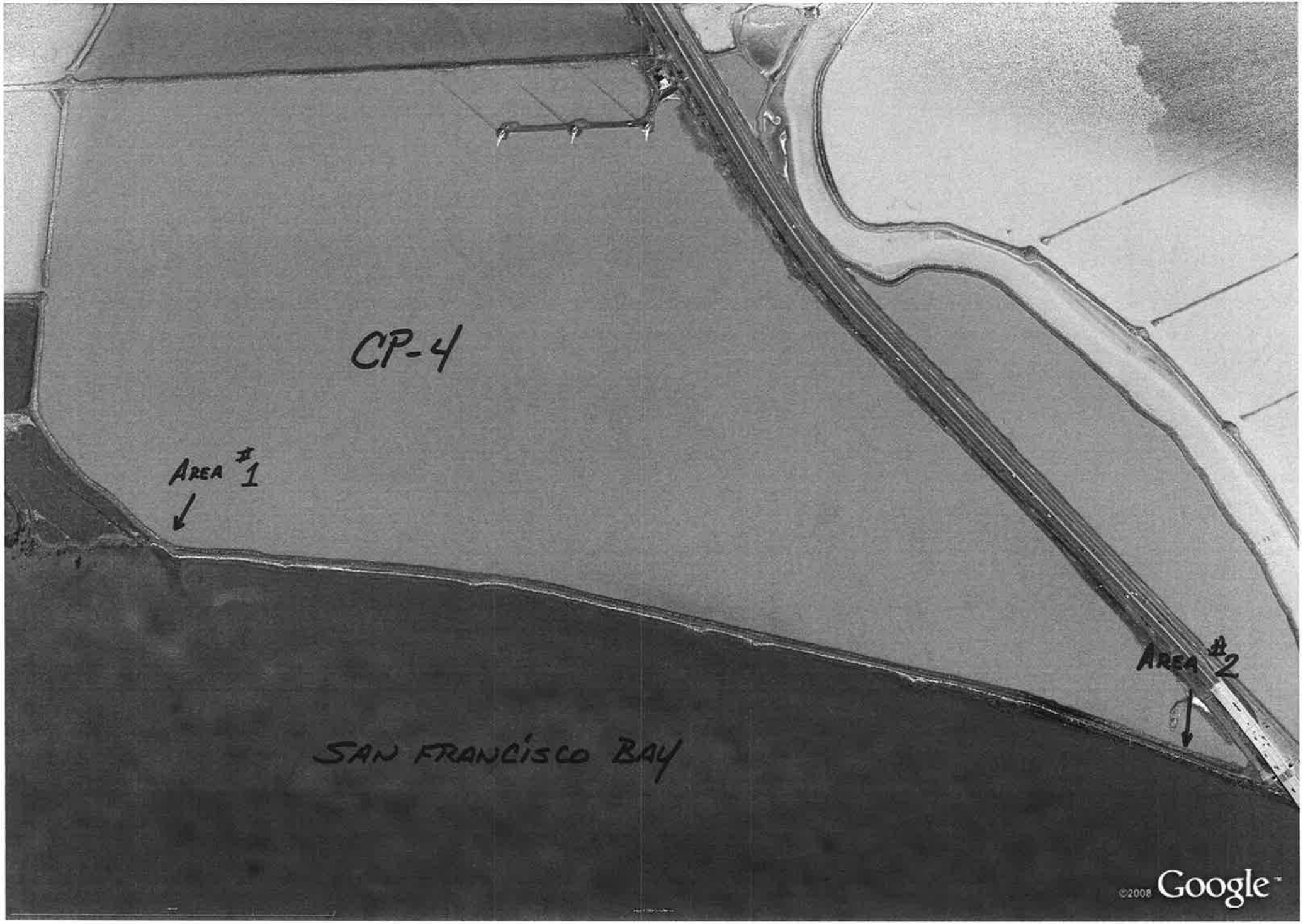
We are requesting that this additional work be included as part of the 401 application submitted to the Regional Board. Please contact me with any questions or any requests to conduct a site visit.

Very truly yours,

Pat Mapelli

Pat Mapelli
Manager, Real Property
Cargill Salt
7200 Central Avenue
Newark, CA 94560

NEWARK
CP-4
SAN FRANCISCO BAY
REDWOOD CITY
Google


CP-4
AREA #1
AREA #2
SAN FRANCISCO BAY
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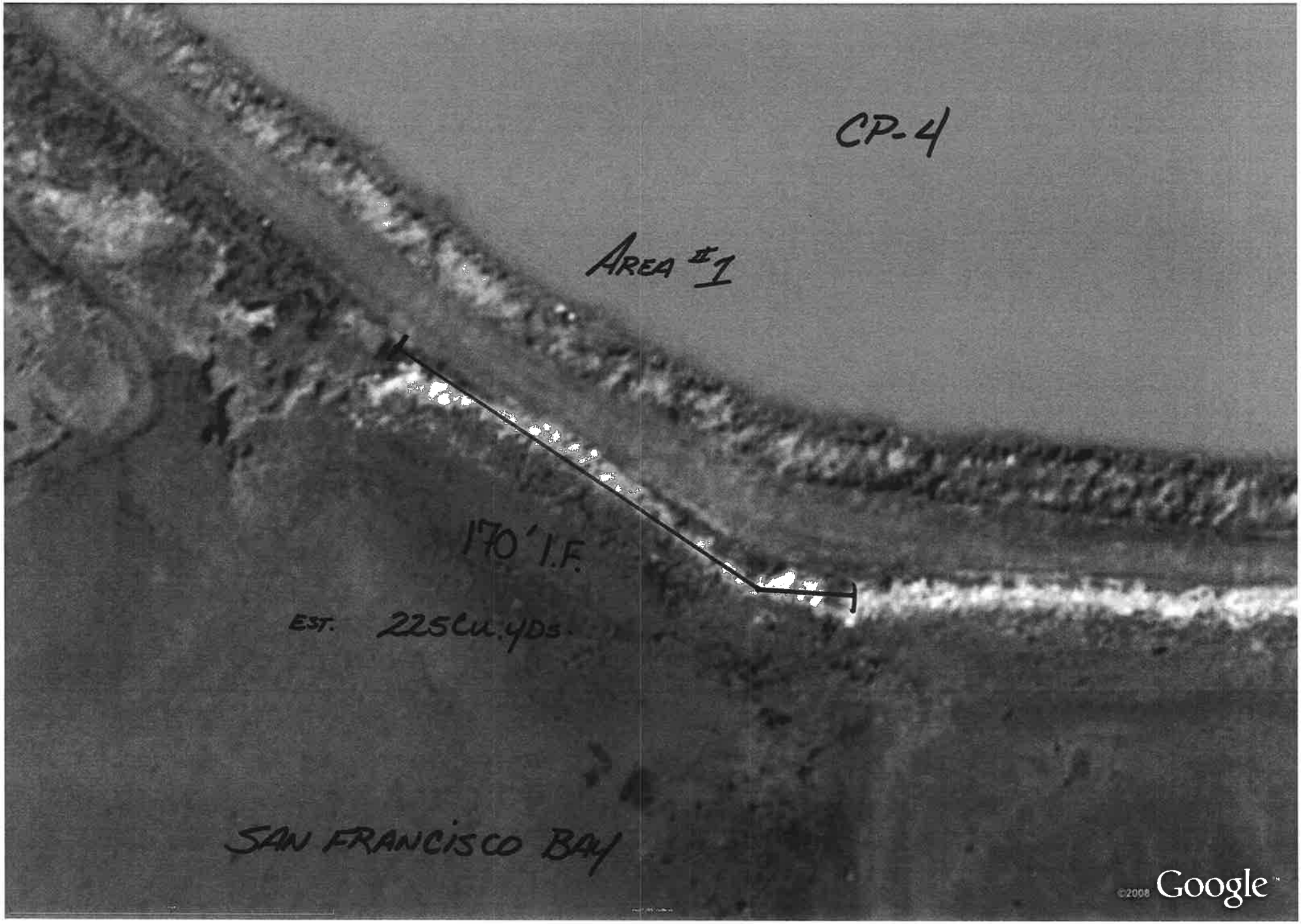
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AREA #1
170' L.F.
EST. 225 CU. YDS.
SAN FRANCISCO BAY
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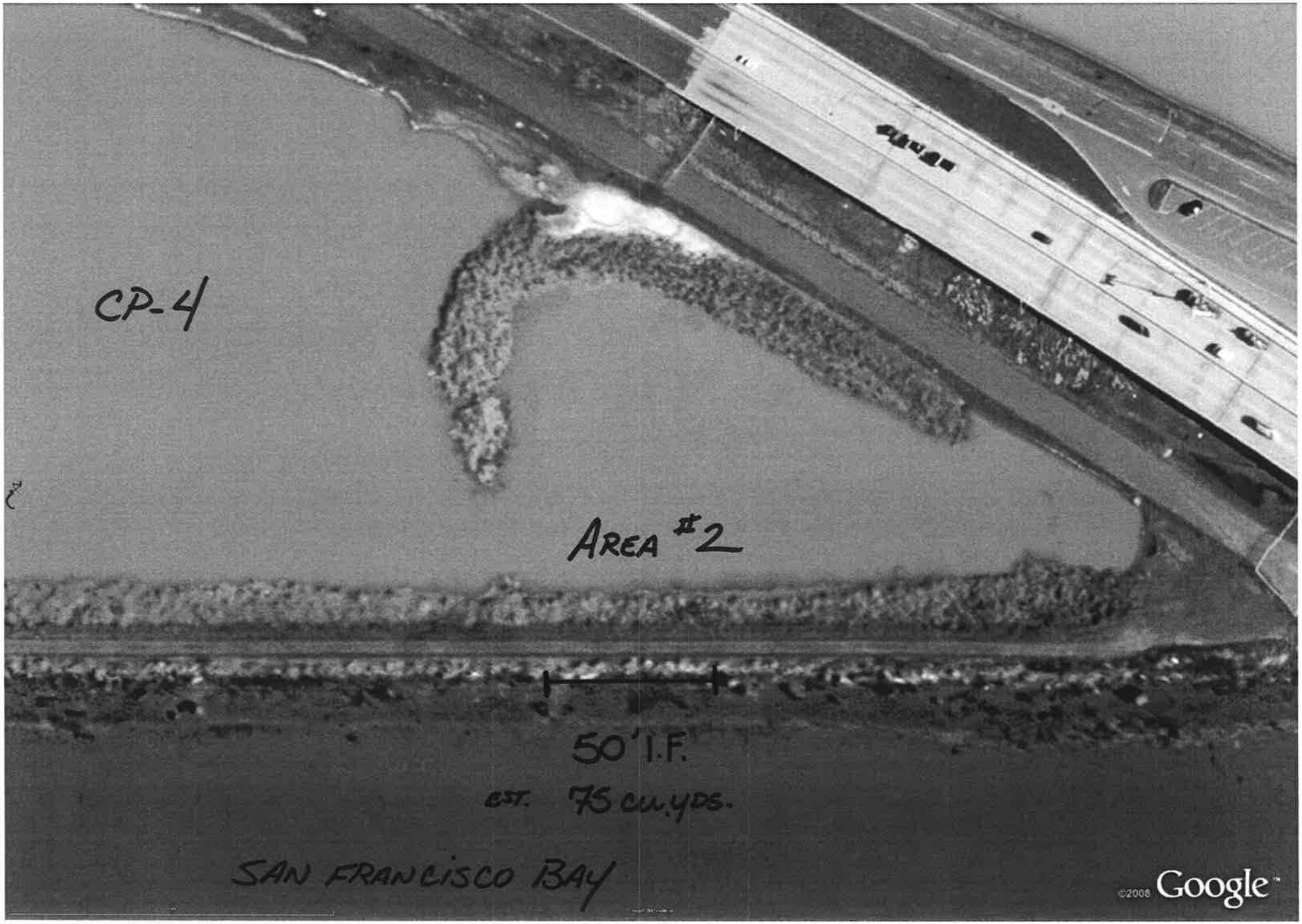
CP-4
AREA #2
50' I.F.
EST. 75 CU.YDS.
SAN FRANCISCO BAY
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Attachment 3

Cargill Maintenance

Major Maintenance Activities and Best Management Practices and Special Conditions to Minimize Adverse Impacts to Endangered Species and Sensitive Natural Resources, and

Major Maintenance Activities

Dredge Lock Access

Dredge locks are accessed on a rotating schedule approximately every two to fifteen years, depending on the maintenance needs of the levee system. Dredging will include: dredging an access channel about 40 to 50 feet wide through salt marsh vegetation or mud flats from a slough to a lock levee and breaching the levee; if the access channel is greater than 60 feet in length, temporarily side casting dredged material onto a pre-approved area near the access cut; if the access channel is less than 70 feet, temporarily storing dredged material on the lock or salt pond levee, or designated (pre-approved) stockpile area. If between 60 and 70 feet, the material may be placed in either area; breaching approximately 200 to 400 cubic yards of the dredge lock levee for dredge entry into the lock basin and placing the breached material in a designated stockpile area, and moving dry stockpile material from past lock entries into the breached area to dam the lock; dredging up to approximately 2,000 cubic yards of accumulated sediment within the basin of the lock and placing the material on the inside and top of the lock levee, on a nearby salt pond levee, or into a nearby salt pond; breaching approximately 400 to 1,000 cubic yards from the main salt pond levee for the dredge to enter the salt pond. The project also includes periodic dredging at the Newark barge canal, with disposal on top of salt pond levees, in salt pond borrow ditches, at dry land locations, or at an available Bay or ocean disposal site.

Levee Maintenance

Earth will be placed on levee tops through the placement of material dredged from inside salt ponds or material imported in the minimum amount necessary to repair or protect levees. Levees will be serviced by a dredge (such as a dragline or barge-mounted dredge, an aquatic excavator, or through marine access). Disposed material is dredged from salt ponds along the inside and top of salt pond levees to maintain levee configuration. This method requires dredge access through pre-approved locations (i.e., dredge locks). In limited instances, levee fortification is accomplished by importing fill material to place on the top of and on the banks of levees, or by dredging muds from the outside, bay, or slough side of the levee for placement on the salt pond levee. Both alternate methods avoid the need for dredge lock access. Dredged sediment deposition occurs on approximately 5% of the salt pond levees a year. The Project Area contains approximately 94 miles of levees to be maintained, including 45 miles of levees that directly abut San Francisco Bay. The levee tops are disked and graded after maintenance occurs. In addition, placement of riprap is required in the minimum amount necessary to protect existing levees. Riprap is necessary due to continued erosion from high wave energy and is maintained on a continuing basis. The amount placed would be the minimum required to provide protection.

Material Stockpiles

Ongoing maintenance requires the storage, on a temporary basis, of shoreline protection

materials at specific, dry land locations approved in writing for levee protection purposes. The project includes the continued practice of using existing dredged material stockpile locations, used to dry material to create an effective dam after dredge lock and salt pond access. Dredged material stockpile locations are re-used, thus disturbance occurs generally in the same area. This temporary fill is a necessary part of maintenance activities for shoreline protection surrounding the salt pond system. Thus, the proposed fill is used to prevent pond brines, at various levels of salinity, from entering Bay waters, or the reverse. In many instances, Cargill has used the same stockpile locations at the dredge locks for many years, at the best locations for maintaining salt pond levees and preventing unnecessary erosion of the dredge locks themselves.

Other Maintenance Activities

In addition, docks, existing marine crossings, intake channels, tide gates, brine ditches, pumps, and water control structures and access facilities will be used and maintained on an in-kind, as needed basis that does not result in a significant enlargement or increase of square footage (i.e., not more than 100 square feet) over that of the existing facility. If required, maintenance may require the installation and use of pipes, culverts, siphons, intake structures, electrical distribution lines for USFWS operations, and pumping facilities, all involving the minimum fill necessary.

Best Management Practices and Special Conditions to Minimize Adverse Impacts to Endangered Species and Sensitive Natural Resources to be Used During Operations And Maintenance Activities.

1. Repair, Replacement and Servicing of Existing Facilities:

a) Repair and replacement of existing bay intake structures, brine control structures, and related facilities such as pumps, gates, pipelines, siphons, open channels and culverts, and removal of silts and algae. Excavated material shall be placed in an identified upland area unless specified otherwise in the advanced notification.

b) Excavating, clearing, and retrenching of existing intake structures and brine conveying ditches so long as the existing configuration is not altered substantially. Excavated material shall be disposed onto levee tops above the plane of the high tide, or hauled off-site to a non-jurisdictional area.

c) Repair and replacement of existing bridges, bridge foundations and abutments within the network of salt pond levees.

d) Repair and replacement of other items such as existing fences, tide gates, siphons in non-tidal areas, power lines, etc, provided such repair and maintenance are for existing infrastructure.

e) Repair of existing authorized reaches of riprap. The authorized riprap areas are designed to have approximately 4:1 slope. If additional work would exceed the existing reach by 10 linear feet, then the proposed design shall be submitted in accordance with the procedures for new work.

2. Ongoing Work:

a) Placement of dredged and/or fill material on the pond side of salt pond levees below the plane of high water in the pond for the purpose of raising and fortifying the levees to

prevent degradation and protect the salt ponds. The material, either dredged mud from the salt pond or imported fill, will be placed along the inside and the top of the salt pond levee in accordance with Best Management Practices. Alternatively, where possible, slough or Bay mud from outside the ponds may be used if the dredge has sufficient reach.

b) Dredging of existing borrow ditches within the salt ponds for the purpose of placing the dredged material on existing levees. This will be performed by a dredge of some type, but likely Cargill's dredge, the *Mallard*.

c) Dredging in salt ponds to allow a dredge to cross a pond. This includes the placement of dredged material on the pond, with the placement of dredged material on the pond bottom along the side of the dredged channel.

d) Dredging of and placement of dredged material at 14 dredge locks (Figure 2), and at any newly constructed authorized dredge locks, to allow the dredge to access the salt ponds. Advanced notification for these activities shall include specific quantities of material to be dredged and placed, and drawings indicating pre-staked, designated areas for stockpiling, side casting and borrowing material. The use of dredge locks shall be specifically approved case by case and follow the BMPs. Breached levee material, stockpiled from the last time the lock was accessed atop the main levee, will be used to dam the breach following entry. Upon dredge exit, breaching and plugging levees in a similar fashion to that described above. The salt marsh muds that were excavated and sidecast in the access cut will be retrieved and placed back into the access cut and channel, closing it behind the dredge. Upon dredge exit, inserting a small culvert into the lock at an elevation that will allow appropriate circulation of high tides into the lock basin to prevent the accumulation of undesired sediments.

e) Dredging within shallow sloughs to provide up to four feet of clearance for access by the dredge to salt ponds. Dredged material that cannot be placed on salt pond levees may be placed on bare mud flats following approval in accordance with the notification procedure. Some slough dredging may also be performed near dredge locks for the purpose of obtaining additional mud to bring the access cut fills to the desired elevation following exit by the dredge.

f) Repair and replacement of siphons that cross salt marsh, sloughs and channels that would require extensive trenching and side-casting mud.

g) Dredging and placement of bay muds into eroded areas along selected outboard levees with the purpose of encouraging the establishment and expansion of salt marsh vegetation to diffuse wave energy and prevent levee erosion. The quantities of dredging material to be moved will vary greatly depending on site specific conditions and will be included in the notification procedures. The desired height of the constructed mounds will approximate the high-tide elevation.

h) Dredging a "sump" approximately 75 feet by 75 feet by 2½ feet deep in the mud flat of a slough in the immediate vicinity of a staked access cut to a dredge lock, placing the dredged mud on an adjacent levee (within reach of the dredge). The "sump" will serve as a receptacle for excess dredged material from cutting the access channel.

<u>3. New Work</u>

a) Installation of new intake and brine control structures, new pumps, siphons, culverts,

power transmission lines, channels/ditches, crossing of channels and streams, in conjunction with new work, or relocation of existing structures.

b) Construction of new pumping donuts, internal coffer dams, and internal salt pond levees.

c) Dredging new borrow ditches within the salt ponds for the purpose of maintaining existing levees through the placement of dredged material.

d) Placement of new riprap made up mostly of small pieces of demolition rubble along outboard and inboard levees as needed to fortify the slopes and prevent erosion, so long as the applicant has adequately demonstrated that the proposed new riprap is placed below the high tide line and/or high pond level at a slope of about 4:1 where needed taking care to minimize the number of voids between the rubble that might be utilized by red foxes. Riprap placed on top of non-eroding salt marsh is not authorized.

Best Management Practices

The following measures have been developed and implemented by the applicant while conducting operations and maintenance work. Explanatory comments, where needed, are shown in [..].

A. Dredge Lock Access and Use:

1) Access dredge locks at the time of the highest tides of the month, but not during tides exceeding +6.9 NGVD unless there is alternative refugial high marsh vegetation near the lock, and it has been identified and approved through the Final Notification procedure;

2) Place dredged material into existing stockpile areas, into lock basins or salt ponds, or on levees, to the maximum extent feasible; avoid sidecasting into salt marsh habitat;

3) 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;

4) If sidecasting is unavoidable, sidecast dredged material in prestaked temporary stockpiles adjacent to the access cut, then return it to the access channel upon exiting to try to restore the preaccess elevations so salt marsh vegetation can regenerate;

5) If additional mud is needed to achieve the optimal elevations for reestablishing vegetation within the access cut, mud will be dredged from the slough channel and placed in the access cut once the dredge has exited;

6) Use dredged material from within the dredge lock basin to build up the lock levee;

7) Place sediment from the lock interior in excess of that required for levee fortification into the salt pond borrow ditches or on the salt pond levee;

8) Place dredged material on the top or on the inboard slope of the lock levee only;

9) Preserve high marsh features created at previous lock access events, such as

vegetated mounds, to the maximum extent feasible;

10) Preserve outboard vegetation on lock levees by only placing dredged material on the top and inboard slope. Vegetative material removed from lock levee tops shall be set aside, then replaced after topping the levee with fresh material;

11) Take steps to prevent the establishment and growth of *Lepidium* on newly topped levees by spraying and/or removing plants by hand during the season immediately following dredge exit from the lock corresponding to the levee complex; [A method currently employed by Cargill to prevent establishment and growth is to bury excavated *Lepidium* under dredged material.]

12) Maintain a 500 foot buffer at active seal pupping locations such as Mowry Slough, unless the buffer is decreased under specific concurrence from the National Marine Fisheries Service.

13) Upon exit from a lock, place a small pipe in the lock levee to equalize hydraulic pressure and to reduce the amount of silt that can accumulate in the lock basin over time; [Or by other means to equalize hydraulic pressure.]

14) Replant the access cut to the lock with appropriate vegetation after lock exit and during suitable season pending accessibility and once desired elevation is established in the cut or re-establish appropriate marsh elevations to accelerate marsh re-vegetation. [Note: The dredge locks that required long access cuts are no longer part of the active salt production system. The locks that are currently in use by Cargill have minimal to no vegetation between the lock and the surrounding tidal mudflats.]

15) Areas of high environmental sensitivity in each lock and pond complex will be identified and described in the advanced notification procedure. Options for temporary placement of sidecast material will be proposed in the Advanced Notification and approved in the Final Notification after Agency review. Areas suitable for possible habitat enhancement within the capability of the dredge will also be included in this process; [Note: In June 2000, WRA reported on the wildlife use of locks based on a 5-year assessment conducted between 1995 and 1999.]

16) Continue to collect data on wildlife use of the locks and salt pond levees. Information from these surveys will be used to evaluate and modify the BMPs over the duration of the permit to avoid or lessen impacts to wildlife habitat.

B. Levee Requirements - In addition to 13) and 14) above, the applicant shall, to the maximum extent feasible:

17) Use chokers on the outside of exterior levees;

18) Slope exterior levee tops inward:

19) Remove any spillage onto the marsh plain that occurs, unless it is deemed by consulting experts that the spillage removal would create additional impacts;

20) Perform levee work, where possible, from the outside of the salt ponds to avoid the use of dredge locks;

21) Place any material in excess of what is needed to top a levee, stockpile, or access - cut backfill, in the salt pond;

22) To lessen the potential for disturbance of nesting clapper rails by dredge work on the outboard levees, the applicant will reduce noise levels of other equipment such as trucks, to the extent possible in sensitive areas identified by the USFWS during review of the Advanced Notification;

23) Preserve intact salt marsh harvest mouse vegetated corridors on at least one side of a levee to the maximum extent possible.

Special Conditions to Minimize Adverse Impacts to Endangered Species and Sensitive Natural Resources

The following conditions shall be implemented by the applicant to minimize and avoid adverse impacts to endangered species as identified in the Biological Opinion of the U.S. Fish and Wildlife Service dated June 9, 1995, the outcome of the Formal Consultation pursuant to Section 7 of the Endangered Species Act. These conditions shall be continued under the new permit with the exception of those items that are shown as "strike out" in the text below because these areas are no longer within the Project Area that Cargill seeks a permit for.

a. The applicant shall conduct call count surveys during the breeding season prior to lock access. Lock entry shall be prohibited during the breeding season if rails are found within 700 feet of a lock. The applicant may not exit a lock during the peak of the breeding season from March 1 through May 31 if breeding clapper rails have been observed within 700 feet in the previous **and** current year. If no rails were found within 700 feet of the lock during call counts performed in the previous **or** current breeding season, exit from the lock will be allowed during the breeding season.

b. The applicant shall avoid commencement of lock access during days when tides are +6.9 feet NGVD and above unless alternative high tide refugia for the clapper rail are available along 100 feet of levee on both sides of the lock, as confirmed by USFWS. In lieu of avoidance of high tides, the applicant may enhance vegetation through an approved plan on 100 feet of salt pond levees on both sides of the lock. This enhancement work shall be done by the applicant in advance of lock entry. Alternately, the applicant may create mounds adjacent to locks on an experimental basis, subject to ACOE approval in the Final Notification.

c. The applicant shall cover the expenses of the additional predator control that Cargill's permitted activities will necessitate on an annual basis, pursuant to the Memorandum of Agreement (MOA) between USFWS and Cargill Salt dated July 1995. [Cargill will continue to cover the expenses of predator control, prorated to the acreage of the current salt system.]

~~d. The applicant shall maintain a 200 foot buffer between snowy plover nesting areas and the operating dredge in all four snowy plover High Use Areas (see Figures 1 and 2), during the plover nesting season, from March 1 through September 14. The dredge will be allowed to pass by active nesting areas as needed to access other portions of the levee system.~~

~~e. The applicant shall manage Pond A-22 for optimal land exposure during the plover~~

~~breeding season from March 1 through September 14 as compensatory mitigation for any take of plovers and other disruption to nesting plovers from dredge material.~~

~~f. As mitigation for potential impacts to the snowy plover, the applicant shall also create beaches along up to 5,000 linear feet of levee elsewhere within the salt pond system. These proposed new beaches shall be included for approval in the Final Notification.~~

~~g. In any one year, the applicant shall access and service levees in no more than two of the three most important post-breeding High Use Areas for the California least tern, Baumberg 10 and 11, Baumberg 1, 2, 4, and 7, Alviso B1, B2, and A2E (see Figures 1 and 2). This leaves at least one of the most important post breeding foraging and roosting areas undisturbed every year for use by least terns.~~

~~h. The applicant shall also mitigate impacts to roosting habitat by creating additional roosting islands and maintaining existing islands in the five least tern High Use Areas. These new features shall be approved in the Final Notification. The number of new islands to be created shall not exceed the number and size of islands currently existing in the five High Use Areas.~~

~~I. In Mallard Slough, the applicant shall not perform any activity associated with the levees within 600 feet of an active heron or egret nest, and between March 1 and April 30 the buffer distance shall be at least 750 feet. The Mallard may pass within the buffer distance, however, if traveling to an alternate work site.~~

[Note: Most of the snowy plover high-useage areas specified in the original BMPS are in the Alviso and Baumberg Complexes which are no longer used or maintained by Cargill.]

j. The applicant shall not perform any activities other than to pass through, within Plant 2, ponds 4 and 5 within 500 feet of an active Caspian tern nest during their breeding season.

k. The USFWS shall be notified within 24 hours of the finding of any injured or dead California clapper rail or western snowy plover or their eggs, salt marsh harvest mouse, or California least tern, or any unanticipated damage to clapper rail, salt marsh harvest mouse, California least tern, or western snowy plover habitat associated with project construction. Notification must include the date, time, and precise location fo the specimen/incident, and any other pertinent information. The USFWS contact person is Cay Goude (916/979-2725). Any dead or injured specimens shall be reposited with USFWS's Division of Law Enforcement, 2800 Cottage Way, Sacramento, California 95825-1846 (916/979-2987).