STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

REGION 2
700 HEINZ AVE., SUITE 200
BERKELEY, CA 94710-2737

(510) 540-3943

December 13, 1993

Ms. Robin Medina
Department of Toxic Substances Control
Office of Statewide Planning
CEQA Tracking Center
Planning and Environmental Analysis Section
400 P Street, Room 4310
P. O. Box 806
Sacramento, California 95812-0806

Dear Ms. Medina:

NOTICE OF DETERMINATION FOR THE CLOSURE PLAN, CHEVRON CHEMICAL COMPANY, 835 CASTRO STREET, RICHMOND, CA 94804
EPA I.D. NO: CAD 043 237 486

We are submitting the Notice of Determination for the above stated project in compliance with Section 21108 of the Public Resources Code. The project was approved on December 13, 1993 as no adverse comments were received either on the draft Closure Plan or the Negative Declaration. Please forward the Notice of Determination to the Governor's Office of Planning and Research with a copy to this office for our records.

If you have any questions, please contact Dr. G.V. Madabhushi at (510) 540-3943.

Sincerely,

Charlene F. Williams

Charlene F. Williams
Acting Chief
Facility Permitting Branch

Enclosures

cc: Mr. Don Johnson (w/o enclosure)
Hazardous Waste Management Branch
Department of Toxic Substances Control
400 P Street, 4th Floor
Sacramento, California 95812-0806

P-5

Printed on Recycled Paper

Mr. Daniel Guerra (w/o enclosure)
Deputy Director
Contra Costa County Environmental
Health
4333 Pacheco Boulevard
Martinez, California 94553

NOD FILING CHECKLIST

This checklist outlines all the required contents of the Notice of Determination (NOD) pursuant to the California Environmental Quality Act (CEQA) and all required information for filing and payment of filing fees through the Planning and Environmental Analysis Section's (PEAS) CEQA Tracking Center (CTC). For further information regarding Notices of Determination, Initial Studies, Negative Declarations, Environmental Impact Reports, Findings of De Minimis, and Certificates of Fee Exemption, contact Don Van Dyke at (916) 323-8749, CALNET 473-8749 or Robin Medina at (916) 322-8162 or CALNET 492-8162.

Instructions:

a)- Review your NOD to assure it contains items 1 through 10.

NOTE: If you are also filing a Finding of De Minimis, use the combined Notice of Determination/Certificate of Fee Exemption form available from PEAS. Do not attempt to file a Finding of De Minimis unless you have consulted PEAS while conducting your Initial Study, and have documented your analysis of De Minimis conditions in the Initial Study checklist.

b)- Fill in information requested in items 1, 3, 4, and 11 through 15.

c)- Send this form along with items 16 through 21 to:

CEQA Tracking Center
Planning and Environmental Analysis Section
P.O. Box 806
Sacramento, CA 95812-0806

Contents of Notice of Determination:

_X_ 1. **Identification of the project including the common name, if any. Please also write the name of the project here.**

Chevron Chemical Consolidation Area Closure Plan.

_X_ 2. **Signature of the Director, Deputy Director, or Branch Chief.** NODs for regulations should have the signature of the Director or one who is designated by the Director to approve regulations.

_X_ 3. **State Clearinghouse Number.** The State Clearinghouse number is assigned by the Governor's Office of Planning and Research (OPR) State Clearinghouse when ten copies of a proposed Negative Declaration or draft Environmental Impact Report are sent to them for responsible agency review. If you cannot locate this number, call the State Clearinghouse at (916) 445-0613, CALNET 485-0613.

Write the State Clearinghouse number here, and include the State Clearinghouse number in the NOD.

SCH # 93111001

_X_ 4. **Date on which the Director, Deputy Director, or Branch Chief approved the project**, i.e., the date the permit, variance, Remedial Action Plan, Record of Decision, Standard 400 form (STD 400), etc., was signed by the Department.

Write the date here and include the date in the NOD.

December 13, 1993

Site Mitigation- If both a Remedial Action Plan and a Record of Decision were approved, list both dates here, but only include the Remedial Action Plan date in the NOD.

_X_ 5. **Location of the project.**835 Castro Street, Richmond, Contra Costa County, CA 94804

_X_ 6. **Brief description of the project.** The Closure Plan allows an impervious cap to be constructed over The Consolidation Area Pond.

_X_ 7. **Determination that the project will or will not have a "significant effect on the environment"** as that term is used in Section 15382 of Title 14 of the Natural Resources Code.

_X_ 8. **Indication if either an EIR or a Negative Declaration has been prepared.**

_X_ 9. **Address where the EIR or Negative Declaration may be examined.**

N/A 10. **If a determination was made that the project will have a significant effect on the environment, include in the NOD a statement of overriding consideration or a reference to where in the record the statement of overriding considerations is found. If the project will not have a significant effect, write "NA" next to the number 10 in this paragraph.** Refer to Sections 15091, 15092, and 15093 of Title 14 of the Natural Resources Code.

Other information needed for filing of NOD and payment of fees:

11. This item applies only to **Permits** and **Regulations being drafted by the Department.**

End of administrative appeal period following the approval or signing. Write the date here.

January 13, 1994

Notes on #11: For permits, this date is the date the permit was approved if no comments on the draft permit were received. If comments on the draft permit were received, the date is 30 days after the permit was approved unless there is an appeal pending. If there is an appeal pending, the date is when the appeal is decided, providing the permit is not substantially revised or denied. If there is an appeal pending, submit the NOD to the CEQA Tracking Center after the appeal is settled.

For projects involving the drafting of regulations indicate the date that the Governor's Office of Administrative Law sends the regulation package to the Secretary of State's office. You may submit the NOD to the CEQA Tracking Center as soon as the STD 400 is signed, however, if you do, you will need to leave this space blank. The CEQA tracking Center will then file the NOD with OPR when it receives word that the Secretary of State has received the regulations.

12. **Index Number** (from time sheet).

6200

13. **PCA number** (from time sheet).

22010

14. **Site number and WP** (from time sheet).

200145 00

15. Contact Information:

Lead staff person G.V. Madabhushi

Telephone of lead staff person (510) 540-3943

PROFS ID, if any, of lead staff person CMADABUS

Region of lead staff person Region 2

Lead staff person's supervisor Sarah L. Picker

Supervisor's telephone (510) 540-3973

Supervisor's PROFS ID SPICKER

Documents to send to the Planning and Environmental Analysis Section:

_X_ 16. **The signed original NOD, or the signed original NOD/Certificate of Fee exemption form.** The NOD must contain all the elements outlined in Numbers 1 through 10 above. If exemption from NOD filing fees is being sought, use the combined Notice of Determination/ Certificate of Fee Exemption form available from PEAS, instead of a standard NOD. Do not attempt to file a Certificate of Fee Exemption or Finding of De Minimis unless you have documented your analysis of De Minimis conditions in the Initial Study checklist and have consulted PEAS before the responsible agency and public review periods.

_X_ 17. **One copy of # 16 above.**

_X_ 18. **One copy of the formal record declaring that the Department has approved the Negative Declaration or the Environmental Impact Report.** PEAS has a form which may be signed by a branch chief and used as the formal record.

_X_ 19. **One copy of the approved final version of the Negative Declaration and Initial Study, or the approved final version of the Environmental Impact Report.**

_X_ 20. **A Finding of De Minimis, if a Certificate of Fee Exemption is being filed.**

_X_ 21. **A copy of number 20 above.**

NEGATIVE DECLARATION APPROVAL

Project Title: Chevron Chemical Consolidation Area Closure Plan

State Clearinghouse Number: SCH # 93111001

Contact Person and Telephone: G.V. Madabhushi, (510) 540-3943

Project Location: 835 Castro Street, Richmond, Contra Costa County, CA 94804

Project Description:

The Closure Plan allows an impervious cap to be constructed over the Consolidation Area Pond. This will prevent the surface water from contact with the contaminated wastes existing in the pond.

The Department of Toxic Substances Control has found on the basis of the Initial Study and comments received on the Negative Declaration that there is no substantial evidence that this project will have a significant effect on the environment.

I hereby approve the Negative Declaration for this project.

Signature: Charlene F. Williams Date: December 13, 1993

Branch Chief (Acting)
Department of Toxic Substances Control

Revised by DTSC, PEAS 5/18/93
NDAPPROV.FRM

NOTICE OF DETERMINATION
CERTIFICATE OF FEE EXEMPTION

Substitute of Form C

To: Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

From: Department of Toxic Substances Control
Office of Statewide Planning
Planning and Environmental Analysis Section
400 P Street, Room 4310
P.O. Box 806
Sacramento, CA 95812-0806

Project Title: Chevron Chemical Consolidation Area Closure Plan

State Clearinghouse Number: SCH # 93111001

Contact Person and Telephone: G.V. Madabhushi, (510) 540-3943

Project Location: 835 Castro Street, Richmond, Contra Costa County, CA 94804

Project Description: The Closure Plan allows an impervious cap to be constructed over the Consolidation Area Pond.

Date project approved: December 13, 1993

This Notice of Determination is filed in compliance with Section 21108 of the Public Resources Code. The Department of Toxic Substances Control (Department), as lead agency, has approved the above described project and the attached Negative Declaration, and has certified the attached finding of de minimis.

The Department has made the determination that the project will not have a significant effect on the environment.

A de minimis finding for this project is attached pursuant to Section 711.4 of the Fish and Game Code, Section 21089 of the Public Resources Code, and Section 753.5 of Title 14 of the California Code of Regulations.

The attached Negative Declaration was prepared for this project pursuant to the provisions of CEQA.

A copy of this Negative Declaration may be examined at the above address of the Department of Toxic Substances Control.

Signature: Charlene F. Williams
Charlene F. Williams, Acting Chief

Date: December 13, 1993

Date received for filing at OPR:

Revised by DTSC, PEAS 2/22/93
NOD&CERT.FRM

DE MINIMIS IMPACT FINDING
FOR
DRAFT CLOSURE PLAN OF CONSOLIDATION AREA
INTEGRATED WASTEWATER POND SYSTEM
CHEVRON CHEMICAL COMPANY

Project Proponent:

Chevron Chemical Company
6001 Bollinger Canyon Road, Bldg. T
San Ramon, California 94583
Contact: Lorne Zipursky, (510) 842-5658

Project Description:

The project is the closure of a surface impoundment called The Consolidation Area, which constituted a portion of the Integrated Wastewater Pond System (IWPS) at Chevron's Richmond facility. The portion of the IWPS which is not covered by the closure plan is in operation and has interim status, even though it no longer manages hazardous waste. The Consolidation Area is approximately 4.5 acres in area and is filled with approximately 100,000 cubic yards of pond bottom materials contaminated with arsenic and pesticides that were removed from other areas within the IWPS. It is covered with 20 mil PVC and a layer of 60 mil High Density Polyethylene (HDPE) membranes. The fill rises eight feet above surrounding grade preventing surface water run-on. A 20 mil PVC membrane was originally placed in the bottom of the unit to separate the underlying soils from the imported fill materials from other ponds. It is not considered to be an effective liner.

The IWPS has a comprehensive containment system comprised of both natural and man-made features, that will serve to protect the environment from any potential releases from the unit. These features include a hydraulic control system (HCS) for lateral containment, the low permeability Bay Mud which underlies the site, and a natural upward hydraulic gradient for vertical containment.

The HCS consists of a containment wall (either an ASPEMIX wall or a slurry wall) and a groundwater extraction trench. Slotted drain pipes installed near the bottom of the trench collect and convey groundwater to sumps spaced at intervals of 500 feet or less along the trench. The trench intercepts the "A" zone and creates a hydraulic barrier that prevents groundwater from migrating beyond the barrier wall system. This condition, in addition to the natural upward flow of groundwater from the "C" zone, prevents migration of contaminants from the confined area of the IWPS.

The final cover for the Consolidation Area is designed in accordance with the closure performance standards of 22CCR 66265.111. The cover system to be constructed will consist of a composite barrier layer, a synthetic drainage layer, a synthetic biotic barrier layer, and a vegetative cover, and will utilize the site-wide hydraulic control system. Run-off from the cover will be collected in a perimeter ditch lined with HDPE for ultimate discharge to Castro Creek. Thus, there is no possibility of contamination of soil, air and water from the project construction.

Initial Study Information:

The initial study has been conducted by the Department to evaluate the possibility of significant effect. A copy of the initial study and checklist are attached.

Declaration of No Evidence of Potential Adverse Effect:

When considering the initial study and the operation record, there is no evidence before the Department that the proposed project will have potential

for an adverse effect on wildlife resources or the habitat upon which the wildlife depends.

Declaration of Rebutment of Presumption:

The Department has, on the basis of substantial evidence, rebutted the presumption of adverse effect contained in Section 753.5(d), Title 14 of the California Code of Regulations.

Certification:

The Department of Toxic Substances Control certifies that it, as lead agency, has made the above findings of fact and that based upon the initial study and upon the record, the project will not individually or cumulatively have an adverse effect on wildlife resources, as defined in Section 711-2 of the Fish and Game Code. Signature verifying this certification is attached.

Signature D S Murphy Date 9/28/93
Branch Chief

Revised 5/17/93 by DTSC/PEAS
ISCLWDM.FRM

INITIAL STUDY
DRAFT CLOSURE PLAN OF CONSOLIDATION AREA
INTEGRATED WASTEWATER POND SYSTEM
CHEVRON CHEMICAL COMPANY
JULY 14, 1993

Project Description:

Chervon Chemical Company (Chevron) submitted a revised closure plan on June 15, 1993 to the Department of Toxic Substances Control (Department) for the closure of a pond which is a portion of the Integrated Wastewater Pond System (IWPS) at the Richmond facility. The IWPS is a system of integrated surface impoundments that were historically used for management of Resource Conservation and Recovery Act (RCRA) hazardous wastes under interim status and which now have been converted to non-hazardous wastewater storage service. Chevron submitted an amended Part B application to the Department on August 26, 1992 for a Permit to manage non-hazardous wastes in the IWPS. The Part B application is not yet processed. The closure plan covers only the area of the IWPS known as the Consolidation Area, which will be closed with wastes in place according to the requirements for closure of a landfill.

The project entails construction of a RCRA cover over the Consolidation Area. The closure plan describes the design of the RCRA cover and its construction specifications. The RCRA cover will minimize the need for further maintenance, limit the amount of water that infiltrates the waste, promote drainage, minimize erosion, and accommodate settling and shear forces generated by earthquakes.

Project Location:

The project site is located in Richmond, in Contra Costa County at 122°22'30"W and 37°57'N. The IWPS is located on the northside of Castro Street, west of 3rd Street, and on the southside of Gertrude Street. Consolidation Area is in the northwest corner of the IWPS. The IWPS is not open to the public. The area is protected by a chain-link fence of at least six feet in height, topped with three strands of anti-climb barbed wire at an angle of 45 degrees to the fence. The southern and western sides are separated from Chevron USA Richmond Refinery by Castro Creek.

Environmental Setting:

The Consolidation Area lies near the western edge of the Richmond Basin. The basin is bounded on the west by the Potrero - San Pablo Ridge and on the east by the western scarp of the Berkeley Hills. The subsurface geology in the basin consists of a thick sequence of alluvial fan and estuarine deposits. The IWPS is located on former marshland, or Bay mud. The Younger Bay Mud ranges in thickness from 2 to 25 feet at the site. It is

underlain by 2 to 6 feet of stiffer and less permeable material known as Older Bay Mud.

Groundwater exists in three water bearing zones; the uppermost or "A" zone, a lower or "B" zone, and an intermediate or "C" zone. The gradients of these three zones slope northwesterly toward San Pablo Bay. The groundwater quality in the "A", "C", and "B" zones is markedly dissimilar. In general, the quality of the "A" water table zone ranges from moderately to highly brackish; the "C" zone ranges from slightly to moderately brackish; and the "B" zone ranges from moderately fresh to brackish. The proximity of the site to San Pablo Bay results in a natural degradation of groundwater quality from east to west, toward the bay.

The IWPS has a comprehensive containment system comprised of both natural and man-made features, that will serve to protect the environment from any potential releases from the unit. These features include a hydraulic control system (HCS) for lateral containment, the low permeability Bay Mud which underlies the site, and a natural upward hydraulic gradient for vertical containment.

The HCS consists of a containment wall (either an ASPEMIX wall or a slurry wall) and a groundwater extraction trench. Slotted drain pipes installed near the bottom of the trench collect and convey groundwater to sumps spaced at intervals of 500 feet or less along the trench. The trench intercepts the "A" zone and creates a hydraulic barrier that prevents groundwater from migrating beyond the barrier wall system. This condition, in addition to the natural upward hydraulic gradient of groundwater from the "C" zone, prevents migration of contaminants from the confined area of the IWPS.

Significant Effects and Mitigation Measures:

The project will not have a significant effect on the environment as that term is defined in Public Resources Code Section 21068. Therefore, no mitigation measures are required. However, the soil and groundwater below the IWPS were contaminated as a result of previous hazardous waste storage. The cleanup of this contamination will be addressed through corrective action either as a part of the post-closure permit for the Consolidation Area or as a part of the RCRA permit for the IWPS. The attached checklist was used to identify possible significant effects.

Zoning, Plans, and Other Applicable Land Use Controls:

The project is in compliance with Contra Costa County's and City of Richmond's Industrial Use Zoning (M-3). Within 60 days of certification of closure of the Consolidation Area, Chevron will submit to the Department, a survey plan and certification-of-deed notation for the Consolidation Area which will indicate that the

land has been used to manage hazardous wastes and that its use is restricted under 22CCR, Chapter 15, Article 7.

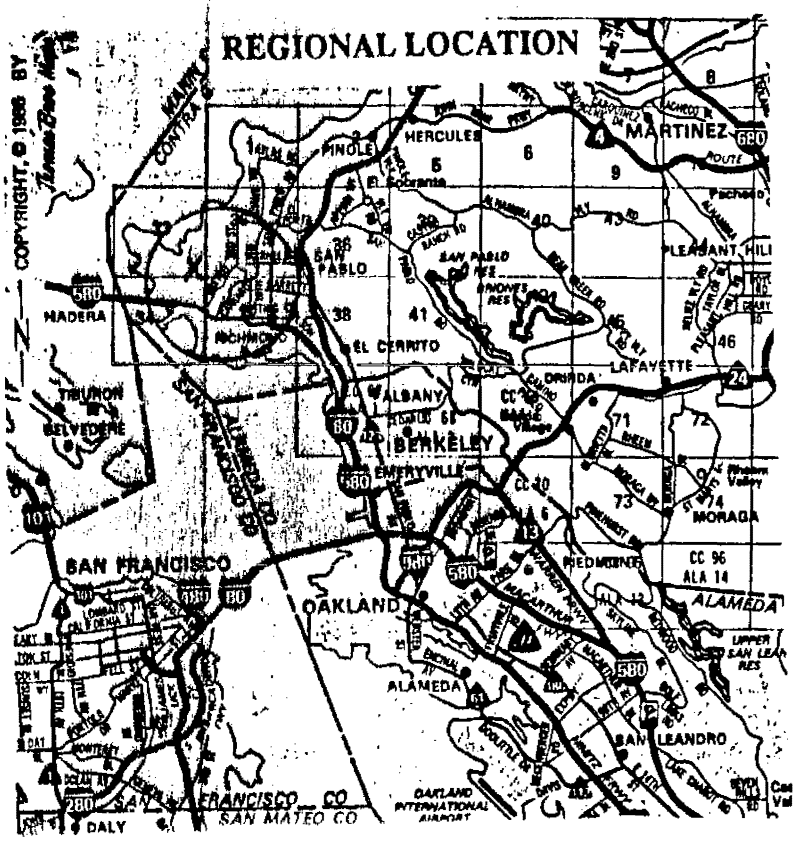
This Initial Study was prepared solely by the Department.

CHEVRON CHEMICAL COMPANY - RICHMOND, CA

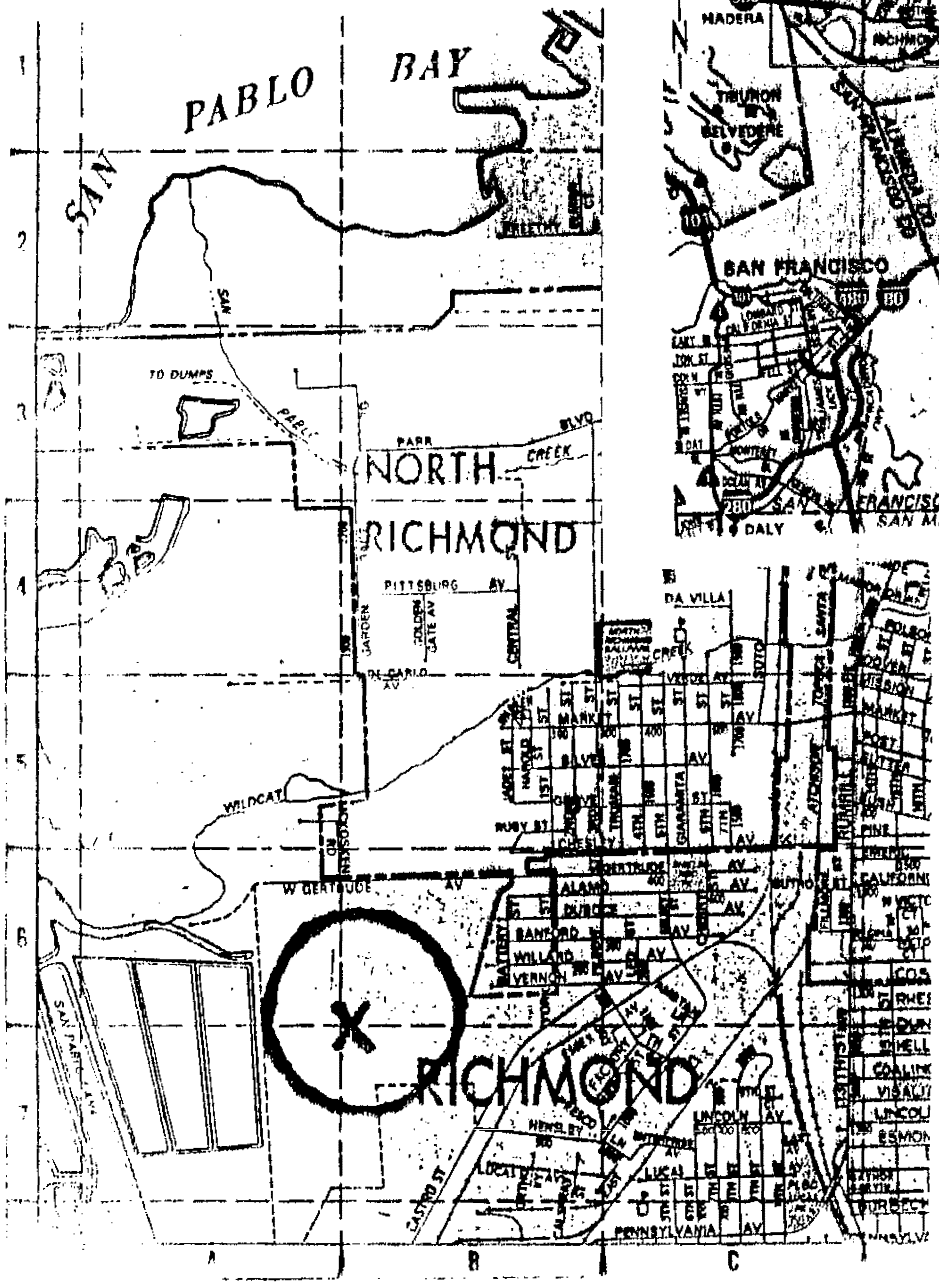
CLOSURE PLAN

CONSOLIDATION AREA - INTEGRATED WASTEWATER POND SYSTEM

REGIONAL LOCATION



PROJECT LOCATION



NEGATIVE DECLARATION
DRAFT CLOSURE PLAN OF CONSOLIDATION AREA
INTEGRATED WASTEWATER POND SYSTEM
CHEVRON CHEMICAL COMPANY

Project Proponent:

Chevron Chemical Company
6001 Bollinger Canyon Road, Bldg. T
San Ramon, California 94583
Contact: Lorne Zipursky, (510) 842-5658

Project Description:

The proposed project is partial closure of an interim status facility. "Closure" is the process in which the facility discontinues active operation by treating, removing from the site, or disposing of on-site, all hazardous wastes in accordance with an approved closure plan.

"Interim Status" means the authorization granted by the Department of Toxic Substances Control which allows a facility to continue to operate pending review and decision of the facility's permit application. In Layman's terms, interim status was given to operating facilities that were "grandfathered" into regulated status when the regulations were put into effect.

For this project, the closure of the Consolidation Area consists of several steps. Since the unit will be closed in place, the fill will not be handled for treatment, stabilization, or removal, thus no procedures are included for such activities. The construction for the closure cover will start by removing the existing HDPE and PVC liners over the fill, building the test pad for the clay layer, carrying out the permeability tests, grading the existing waste fill, placing the various impervious layers of the cover, and constructing the drainage system. Above the drainage layer, the final cover consists of 12 inches of imported fill and 6 inches of top soil. To minimize erosion, the surface will be hydroseeded to establish a perennial grass similar to native grass in nearby areas.

During the closure of the unit, decontamination of equipment and personnel will be performed within an existing decontamination area. This area will completely contain all decontamination activity, contaminated rinsate and materials. The rinsate will be collected and held for analysis. It will be treated in the on-site water treatment unit if necessary, or discharged to the sanitary sewer.

Project Location:

The project is located within the IWPS of Chevron's Richmond facility. Consolidation Area is in the northwest corner of the IWPS which lies on the northside of Castro Street, westside of 3rd Street, and southside of Gertrude Street. The project site is not open to the public and is protected by a chain-link fence.

Findings of Significant Effect on Environment:

The Department has determined that the project will not have a significant effect on the environment as that term is defined in the Public Resources Code Section 21068. A copy of the initial study which supports this finding is attached.

Mitigation Measures:

This project does not include mitigation measures. However, the soil and groundwater below the project site were contaminated as a result of previous hazardous waste storage in the IWPS. The contamination is effectively contained on all sides by a wall. The mitigation of this contamination will be addressed through corrective action portion of either a post-closure permit for the Consolidation Area or a RCRA permit for the IWPS.

INITIAL STUDY SPECIAL CHECKLIST FOR

DRAFT CLOSURE PLAN OF CONSOLIDATION AREA
Integrated Wastewater Pond System, Chevron Chemical Company
835 Castro Street, Richmond, California 94804

This checklist has two purposes, to identify any reasonable possibility of "significant effect on the environment" as that term is used in Section 21068 of the Public Resources Code, and to identify "adverse effect, either individually or cumulatively, on wildlife" as that term is used in Sections 753.5 (c) and (d) of Title 14 of the California Code of Regulations.

"Significant effect on the environment" (significant effect) means a substantial, or potentially substantial, adverse change in the environment.

"Adverse effect, either individually or cumulatively, on wildlife" means an adverse change of any type or degree, either individually or cumulatively, on any wild animals, birds, plants, fish, amphibians, and related ecological communities, including the habitat upon which the wildlife depends for its continued viability. (Refer to the items contained in the shaded boxes.)

		Substantial or potentially substantial adverse change		
		Yes	Maybe	No
1.	**Earth** Will the proposal result in:			
	a. Unstable earth conditions or in changes in geologic structures?	___	___	X
	b. Disruptions, displacements, compaction or overcovering of the soil?	___	___	X
	c. Change in topography or ground surface relief features?	___	___	X
	d. The destruction, covering or modification of any unique geologic or physical features?	___	___	X
	e. Any increase in wind or water erosion of soils, either on or off the site?	___	___	X
	f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?	___	___	X

		Substantial or potentially substantial adverse change		
		Yes	Maybe	No
g.	Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?	___	___	X

		Any adverse change	
		Yes	No
h.	Changes to any riparian land or wetlands under state or federal jurisdiction?	___	X
i.	Changes to soil required to sustain habitat for fish and wildlife?	___	X

Chevron Chemical Company proposes in its closure plan to cover the Consolidation Area with an impervious cap designed to minimize infiltration of water from the surface. The Consolidation Area pond is about 4.5 acres in area and was filled with approximately 100,000 cubic yards of pond bottom materials contaminated with arsenic and pesticides that were removed from other ponds located near it. At present, the Consolidation Area is covered with 20 mil PVC and a layer of 60 mil High Density Polyethylene (HDPE) membranes. The fill rises eight feet above surrounding grade preventing surface water run-on. The proposed impervious cap minimizes the need for further maintenance, limits the amount of water that infiltrates the waste, promotes drainage, minimizes erosion, and accommodates settling and shear forces generated by earthquakes. Pages 3 to 8 of the closure plan describe the details of the cover design proposed.

		Substantial or potentially substantial adverse change		
		Yes	Maybe	No
2. **Air**	Will the proposal result in:			
a.	Substantial air emissions or deterioration of ambient air quality?	___	___	X
b.	The creation of objectionable odors?	___	___	X
c.	Alteration of air movement, moisture, or temperature, or any change in climate, either locally or regionally?	___	___	X

		Any adverse change	
		Yes	No
d.	Degradation of any air resources which will individually or cumulatively result in a loss of biological diversity among the plants and animals residing in that air?	___	X

The Consolidation Area was covered with a temporary cover as described previously in 1. The permanent cover that will be placed will prevent any possible air emissions. The waste materials inside the Consolidation Area are not volatile in nature (Ex: Arsenic, pesticides), and the impervious cover that will be constructed will give no opportunity for exposure to any air emissions. The Health and Safety Plan provides all precautions to prevent exposure of workers to the waste during the construction of permanent cover.

Pages 3 to 8 of the closure plan describe the details of the cover design which will prevent any air contamination.

		Substantial or potentially substantial adverse change		
		Yes	Maybe	No
3.	**Water** Will the proposal result in:			
a.	Changes in currents, or the course of direction of water movements, in either marine or fresh waters?	___	___	X
b.	Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	___	___	X
c.	Alterations to the course or flow of flood waters?	___	___	X
d.	Change in the amount of surface water in any water body?	___	___	X
e.	Discharge into surface waters, or in any alteration of surface water quality, including but not limited to, temperature, dissolved oxygen or turbidity?	___	___	X
f.	Alteration of the direction or rate of flow of ground waters?	___	___	X
g.	Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	___	___	X
h.	Substantial reduction in the amount of water otherwise available for public water supplies?	___	___	X
i.	Exposure of people or property to water related hazards such as flooding or tidal waves?	___	___	X

		Any adverse change	
		Yes	No
j.	Change to riparian land, rivers, streams, watercourses and wetlands under state and federal jurisdiction?	___	X
k.	Change to any water resources which will individually or cumulatively result in a loss of biological diversity among the plants and animals residing in that water?	___	X

See the explanation on Attachment A.

		Substantial or potentially substantial adverse change Yes	Maybe	No
4.	**Plant Life** Will the proposal result in:			
a.	Change in the diversity of species, or number of any species of plant (including trees, shrubs, grass, crops, and aquatic plants)?	___	___	X
b.	Reduction of the numbers of any unique, rare or endangered species of plants?	___	___	X
c.	Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	___	___	X
d.	Reduction in acreage of any agricultural crop?	___	___	X
e.	Deterioration of existing plant habitat?	___	___	X

		Any adverse change Yes	No
f.	Any adverse effect to native and non-native plant life?	___	X
g.	Effects to rare and unique plant life and ecological communities dependent on plant life?	___	X
h.	Any adverse effect to listed threatened and endangered plants?	___	X
i.	Effects on habitat in which listed threatened and endangered plants are believed to reside?	___	X
j.	Effects on species of plants listed as protected or identified for special management in the Fish and Game Code, the Public Resources Code, the Water Code, or regulations adopted thereunder?	___	X
k.	Effects on marine and terrestrial plant species subject to the jurisdiction of the Department of Fish and Game and the ecological communities in which they reside?	___	X

See the explanation on Attachment B.

	Substantial or potentially substantial adverse change		
	Yes	Maybe	No
5. Animal Life Will the proposal result in:			
a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects)?	___	___	X
b. Reduction of the numbers of any unique, rare or endangered species of animals?	___	___	X
c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	___	___	X
d. Deterioration to existing fish or wildlife habitat?	___	___	X

	Any adverse change	
	Yes	No
e. Effects on listed threatened or endangered animals?	___	X
f. Effects on habitat in which listed threatened and endangered animals are believed to reside?	___	X
g. Effects on species of animals listed as protected or identified for special management in the Fish and Game Code, the Public Resources Code, the Water Code, or regulations adopted thereunder?	___	X
h. Effects on marine and terrestrial animal species subject to the jurisdiction of the Department of Fish and Game and the ecological communities in which they reside?	___	X

See Attachment C for explanation.

	Substantial or potentially substantial adverse change		
	Yes	Maybe	No
6. **Land Use** Will the proposal result in a substantial alteration of the present or planned land use of an area?	___	___	X

The proposed cover will not result in a substantial alteration of the present or planned land use of the area. The Consolidation Area is a small portion of the hazardous waste management facility that will be operated and managed for many years to come by Chevron Chemical Company. Even though the Consolidation Area will be closed as a landfill, it will be maintained with the rest of the hazardous waste management facility under a post-closure maintenance plan. Therefore, there will be no substantial change or alteration of the present or planned land use. Pages 13 to 22 of the closure plan explain the details of the post-closure maintenance of the Consolidation Area.

	Substantial or potentially substantial adverse change		
	Yes	Maybe	No
7. **Natural Resources** Will the proposal result in an increase in the rate of use of any natural resources?	___	____	X

The proposed cover for the Consolidation Area will not result in an increase in the rate of use of any natural resources. The Consolidation Area was already made inactive when it was filled with pond sediments excavated from the nearby ponds under the Toxics Pits Control Act, and subsequently it was covered with a temporary impervious cover consisting of 20 mil PVC and 60 mil HDPE membranes. By constructing a permanent cover and maintaining it, there will be no increase in the rate of use of any natural resources. The quantities of fill materials such as the natural soil to grow grass, gravel for the drainage layer, and clay used for the impervious barrier layer, will create only insignificant depletion of natural resources for an insignificant period of time and will be replenished by the natural recovery processes over time. Pages 3 to 9 of the closure plan describe the cover design and construction.

	Substantial or potentially substantial adverse change		
	Yes	Maybe	No
8. **Risk of Upset** Will the proposal involve:			
a. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?	___	____	X
b. Possible interference with an emergency response plan or an emergency evacuation plan?	___	____	X

Pages 16 to 18 of the closure plan explain the post-closure maintenance, inspection and care, and security of the Consolidation Area after closure. The proposed cover will consist of inert materials that protect the top of the waste. During construction, there will be no risk of explosion or release of hazardous substances. The hazardous waste which filled the Consolidation Area pond consists of arsenic and pesticides and thus does not cause any explosive reactions. The hazardous waste is underlain by impervious bay mud and the whole Integrated Wastewater Pond System is surrounded by an impervious barrier wall which penetrates the bay mud. Thus, there is no possibility of a risk of upset or possible interference with an emergency response or evacuation plan.

		Substantial or potentially substantial adverse change		
		Yes	Maybe	No
9.	**Transportation/Circulation** Will the proposal result in:			
a.	Generation of substantial additional vehicular movement?	___	___	X
b.	Effects on existing parking facilities, or demand for new parking?	___	___	X
c.	Substantial impact upon existing transportation systems?	___	___	X
d.	Alterations to present patterns of circulation or movement of people and/or goods?	___	___	X
e.	Alterations to waterborne, rail or air traffic?	___	___	X
f.	Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	___	___	X

The construction of the cover will involve some movement of the construction equipment used for construction operations. However, the construction will be completed in about 6 months and the construction equipment will be removed from the site. There is sufficient space available near the Consolidation Area for parking the construction equipment and the site is located in a remote area away from public transportation, bicyclists or pedestrians. Moreover, the site is not accessible to the outside public and is under strict security measures provided by Chevron Chemical Company. Therefore, there will be no impact on transportation and circulation.

		Substantial or potentially substantial adverse change		
		Yes	Maybe	No
10.	**Public Services** Will the proposal have an effect upon, or result in a need for new or altered governmental services in any or the following areas:			
	a. Fire protection?	___	____	X
	b. Police protection?	___	____	X
	c. Schools?	___	____	X
	d. Parks or their recreational facilities?	___	____	X
	e. Maintenance of public facilities, including roads?	___	____	X
	f. Other governmental services?	___	____	X

The proposed construction of the cover over the Consolidation Area will have no effect upon governmental services. The site belongs to Chevron Chemical Company which is a private industrial organization. The site is well guarded, protected from fire, fenced all around, and isolated from police, schools, parks, roads, and other governmental services. The financial assurance and liability for the construction is fully guaranteed by Chevron in the closure plan in Appendix H. Therefore, the impact on public services is none.

	Substantial or potentially substantial adverse change		
	Yes	Maybe	No
11. **Energy** Will the proposal result in:			
a. Use of substantial amounts of fuel or energy?	___	___	X
b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?	___	___	X

The construction of the cover over the Consolidation Area will involve use of insignificant amounts of fuel and electricity. This will not cause substantial increase in demand upon existing sources of energy, or require the development of new sources of energy. Since the construction will be completed in about six months, the proposal will not result in adverse impacts on the existing sources of energy. The on-going maintenance of cover will not require a significant expenditure of energy resources.

	Substantial or potentially substantial adverse change		
	Yes	Maybe	No
12. **Utilities** Will the proposal result in a need for new systems, or substantial alterations to any utilities?	___	____	X

The construction of the cover will not result in a need for new systems, or substantial alterations to any utilities. All utilities required for construction are already available and existing for the operation of the Chevron Chemical Company. The irrigation of newly planted grass cover will require usage of water in the summer season. Therefore, this will not cause any adverse impacts on the utilities.

	Substantial or potentially substantial adverse change		
	Yes	Maybe	No
13. **Human Health** Will the proposal result in:			
a. Creation of any health hazard or potential health hazard (excluding mental health)?	___	____	X
b. Exposure of people to potential health hazards?	___	____	X

The construction of the cover over the Consolidation Area will not cause any potential health hazard or exposure of people to potential health hazards. The ponds existing at the site are no longer storing hazardous waste waters. The hazardous sediments from the ponds were removed in 1988 under the Toxic Pits Control Act, and were deposited in the Consolidation Area. A temporary impervious cover was placed on these hazardous sediments to protect the public. The Health and Safety Plan provided in Appendix F of the closure plan makes sure that all potential health hazards are eliminated and exposure of people to potential health hazards is prevented.

ATTACHMENT A

The proposed cover will have no adverse impact on either surface water or groundwater. The impervious layers of the cover that will be constructed over the Consolidation Area will not allow any surface water to enter the hazardous waste material existing as a fill inside the surface impoundment. The impervious portion is a composite barrier layer which will consist of 18 inches of compacted clay and a 60 mil HDPE membrane. The clay layer and the HDPE layer will provide together a permeability less than or equal to that of the bay mud underlying the unit (1×10^{-6} cms/sec).

The Hydrologic Evaluation of Landfill Performance (HELP) model data provided in the closure plan show that the performance of the cover is also comparable to the conventional design suggested in U. S. EPA guidance document. Thus, any adverse impact on the groundwater is not possible.

Surface run-off from the cover will be collected in a perimeter ditch lined with HDPE. The stormwater will be led through a 24-inch culvert and then through a second ditch lined with asphalt until it finally results in a discharge to the Castro Creek. Therefore, there is no possibility for contamination of surface water prior to its discharge to the Castro Creek.

Pages 4 to 7 of the closure plan provide details of the final cover and drainage to prevent any adverse impacts on water.

ATTACHMENT B

The proposed cover will not have any adverse impact on plant life. In fact, it will enhance the growth of plant life. The proposed cover design (top) will involve growing native grass on top to prevent erosion, provide water storage capacity, and improve the aesthetic quality of the closure area. Page 5 of the closure plan explains these activities which will have no adverse impact on the plant life.

ATTACHMENT C

The proposed cover design will not have any adverse impact on the animal life. In fact, it prevents animals from burrowing into the hazardous waste lying below the proposed cover. To prevent intrusion of burrowing vectors into the drainage and barrier layers of the proposed cover, polyethylene netting will be placed between the topsoil and imported fill layers. In addition, the 60 mil HDPE membrane prevents access to the underlying hazardous waste from burrowing vectors. The drainage provided will allow clean water to be discharged to the Castro Creek in the event of a storm. Pages 5 to 7 of the closure plan explain these measures taken to protect the animal life.