

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IX

In The Matter Of:

The Del Amo Superfund Site
Los Angeles, California
Del Amo Waste Pits Operable Unit

Shell Oil Company
Dow Chemical Company
United States General Services
Administration

Respondents

Proceeding Under Section 106(a) of the
Comprehensive Environmental Response,
Compensation, and Liability Act of 1980,
as amended (42 U.S.C. § 9606(a))

U.S. EPA
Docket No. 98-06

ADMINISTRATIVE ORDER
FOR REMEDIAL DESIGN

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ATTACHMENTS

Attachment 1: Record of Decision

Attachment 2: Statement of Work

ADMINISTRATIVE ORDER
FOR REMEDIAL DESIGN

I. INTRODUCTION AND JURISDICTION

1. This Order directs the Respondents Shell Oil Company and the Dow Chemical Company to perform a remedial design for the remedy described in the Record of Decision for the Del Amo Superfund Site, Waste Pits Operable Unit, dated September 5, 1997. The obligations of Respondent United States General Services Administration (hereinafter referred to as "Respondent GSA") are addressed in paragraph 20 of this Order. This Order is issued to Respondents by the United States Environmental Protection Agency ("EPA") under the authority vested in the President of the United States by section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580 (52 Fed. Reg. 2923, January 29, 1987). This authority was further delegated to EPA Regional Administrators on September 13, 1987 by EPA Delegation No. 14-14-B, and was further delegated to the Director, Superfund Division, by the corresponding Region IX delegation dated September 29, 1997.

II. FINDINGS OF FACT

2. Site History

A. The Del Amo National Priorities List Superfund Site (the "Site") is located in a section of the city of Los Angeles known as the Harbor Gateway, a half mile wide appendage of the city that extends from the main body of the city south to the coast near Long Beach, California. The Site is located

approximately 6 miles south of the main body of the city and 10 miles north of the Pacific Coast. The subject of this Order is the Waste Pits Area, a 4-acre portion of the Site located at the southern Site boundary in a part of the Site formerly occupied by a synthetic rubber manufacturing operation. The Waste Pits Area consists of two parcels: Lot 36 and Lot 37, as identified on the Los Angeles County Assessor's Map Number 7351-034 Northwest. (See Figure 1 of the Record of Decision for the Del Amo Waste Pits Operable Unit, which is appended hereto as Attachment 1.)

B. From 1942 through 1971, a synthetic rubber manufacturing operation, consisting of three separate plants, covered 280 acres at the Site. From 1942 until 1955, the rubber manufacturing operation consisted of a styrene plant operated by Dow Chemical Company, a butadiene plant operated by Shell Oil Company, and a synthetic rubber (copolymer) plant operated by U.S. Rubber Company, Goodyear Tire & Rubber Company, and others. During this period, the United States owned all three plants, which were operated by the above-noted companies under agreements with the United States. In 1955, the United States sold all three plants to Shell Oil Company, and Shell continued to operate these plants until 1971.

C. Synthetic rubber was produced by manufacturing styrene and butadiene separately, piping them to the rubber plant, and then chemically synthesizing the two into synthetic rubber. Raw materials and finished products were stored primarily in aboveground tanks. Some feedstock chemicals, particularly benzene, were delivered via underground pipeline from off-site sources. The primary feedstocks for styrene manufacture were propane and crude benzene. Other chemicals used or produced in the process included toluene, ethylbenzene, styrene, hydrochloric acid, and sulfuric acid. The feedstocks for butadiene manufacture, including a mixture of butane, butylene and butadiene, were received primarily by pipeline. Synthetic rubber

was produced in a series of reactions by combining styrene and butadiene with lesser amounts of other chemicals, including soap solutions and acid solutions.

D. At various times during the operation of the facility, wastes from the production processes were disposed of in a waste disposal area located on Lots 36 and 37 of the Site ("the Waste Pits Area"). The Waste Pits Area consists of a series of six unlined waste disposal pits and four unlined evaporation ponds, which have been covered or filled with soil at various points in the past.

E. Contaminated waste remains beneath the soil surface at various locations in the Waste Pits Area, and soil beneath and adjacent to the waste disposal pits is also contaminated. The groundwater beneath the pits is heavily laden with hazardous substances from both the waste pits and other upgradient Site sources.

F. When Shell Oil Company closed the three plants in 1972, the unlined waste disposal pits and evaporation ponds had already been covered with soil fill. Shell sold the property to a development company in 1972, and the three plants were dismantled.

G. Most of the 280-acre area once occupied by the synthetic rubber manufacturing operation has since been redeveloped as an industrial park. Today, Lot 36 of the 4-acre Waste Pits Area is a vacant lot surrounded by a double row of chain-link fencing and covered by soil fill and weeds. Lot 36 is currently owned by Triton Diagnostics, a wholly owned subsidiary of Shell Oil Company. Pursuant to an EPA unilateral administrative order, Shell Oil Company conducts regular inspections of Lot 36 as well as regular fence maintenance and weed mowing. Lot 37 of the 4-acre Waste Pits Area is currently

owned by Western Waste Industries, and is also a vacant lot covered by soil fill and vegetation and surrounded by a double row chain link fence. The Waste Pits Area is bounded by industrial and commercial development on the north and by Del Amo Boulevard with adjacent residences on the south. Electrical power transmission easements run along the northern and southern boundaries of the Waste Pits Area, and two major underground petroleum and chemical pipeline corridors run along its southern boundary. The adjacent residential community south of the Waste Pits Area lies within the jurisdiction of unincorporated Los Angeles County.

H. The land upon which the Site sits is a relatively flat alluvial plain. Underlying the Site are alluvial deposits of sands, silts and clays that extend down hundreds of feet. These deposits contain four distinct and separate aquifers, the third and fourth (deepest) of which are used for municipal drinking water. There are no surface water resources at the Site.

I. The Record of Decision for the Del Amo Waste Pits Operable Unit (September 5, 1997) and the Focused Feasibility Study Report for the Waste Pits Area (December 1996) describe the Site conditions and the Waste Pits Area in greater detail.

3. Respondents

A. Respondent Shell Oil Company was, from 1942 until 1955, the operator of the butadiene plant at the Site under an agreement with the United States, which owned all three plants. In 1955, Respondent Shell Oil Company purchased all three plants, and continued to own and operate the three plants (including the Waste Pits Area) until 1971. From the mid-1940's through 1971, hazardous substances, including some or all of those described in Section II, Paragraph 5A below, were, at various times, disposed of at the Waste Pits Area.

B. Respondent Dow Chemical Company was, from 1942 until 1955, the operator of the styrene plant at the Site under an agreement with the United States, which owned all three plants (including the Waste Pits Area). At various times during that period, hazardous substances, including some or all of those described in Section II, Paragraph 5A below, were disposed of at the Waste Pits Area by Dow Chemical Company.

C. Respondent GSA has been administratively assigned certain responsibilities attributable to the various federal government corporations and entities that owned the Site on behalf of the United States for a period of time during and following World War II. Those federal government corporations and entities have been terminated. During their ownership of the Site, hazardous substances, including some or all of those substances described in Section II, Paragraph 5.A below, were disposed of at the Waste Pits Area.

4. History of EPA investigation

A. On September 25, 1997 (62 Fed. Reg. 50444), pursuant to section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Del Amo Superfund Site on the National Priorities List ("NPL"), set forth at 40 C.F.R. Part 300, Appendix B.

B. To study and undertake response activities in phases, EPA divided the Site into operable units. The operable units for the Site are the Waste Pits Area, the groundwater, and the remainder of the Site (primarily soil contamination). This Order addresses remedial design at the Waste Pits Operable Unit.

C. In 1983, the California Department of Toxic Substances Control (DTSC) began investigating waste disposal areas within

the Waste Pits Area. In 1984, contamination was discovered in the waste pits and underlying soils. From 1985 until 1991, Dow Chemical Company, Shell Oil Company and G.P. Holdings (a landowner identified as a potentially responsible party) undertook a Remedial Investigation and Feasibility Study ("RI/FS") for Lot 36 under a Memorandum of Agreement and subsequently under an Administrative Order with the California Department of Toxic Substances Control ("DTSC"). In 1991, DTSC issued a Notice of Non-Compliance and terminated the Administrative Order. In July 1991, EPA proposed the Del Amo Site to be added to EPA's National Priorities List (NPL), and DTSC referred the Site to EPA shortly thereafter. On May 7, 1992, Shell Oil Company and Dow Chemical Company, entered into an Administrative Order on Consent (U.S. EPA Docket No. 92-13) with EPA and California Department of Toxic Substances Control (DTSC) agreeing to perform a Remedial Investigation/Feasibility Study (RI/FS) for the Site, pursuant to CERCLA and the National Contingency Plan, 40 C.F.R. Part 300. In addition, Dow and Shell agreed to perform an accelerated RI/FS for the Waste Pits Area. After rejecting several drafts of the focused RI/FS for the Waste Pits Area due to inaccuracies and poor quality, EPA performed part of the RI/FS, which Shell Oil Company and Dow Chemical Company included into the focused RI/FS for the Waste Pits Area. EPA finally approved the revised Focused Feasibility Study Report for the Waste Pits Area in December, 1996.

D. Pursuant to section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the Focused Feasibility Study Report for the Waste Pits Area and of the proposed plan for remedial action on December 16, 1996, and provided opportunity for public comment on the proposed remedial action.

E. The decision by EPA on the remedial action to be implemented at the Del Amo Superfund Site, Del Amo Waste Pits Operable Unit, is embodied in a final Record of Decision ("ROD"),

executed on September 5, 1997, on which the State of California has given its concurrence. The Record of Decision is attached to this Order as Attachment 1 and is incorporated by reference. The Record of Decision is supported by an administrative record that contains the documents and information upon which EPA based the selection of the response action.

5. Site Releases

A. The primary contaminants of concern in the Waste Pits Area are semi-volatile organic compounds (SVOCs) and volatile organic compounds (VOCs). Benzene, a VOC and known human carcinogen, is the most frequently found hazardous substance in the waste pits, the soil beneath and adjacent to the waste pits, and the groundwater. Other VOCs found in the Waste Pits Area include toluene, ethylbenzene and styrene. Naphthalene, an SVOC, is the polycyclic aromatic hydrocarbon (PAH) found most often and in the highest concentration in both the waste pits and the soil. Although naphthalene is not classified as a human carcinogen, acute or chronic exposure to naphthalene can cause a number of adverse health effects in humans, including cataracts, dermatitis and anemia. Other SVOCs found in the Waste Pits Area include anthracene, chrysene, fluorene, and phenanthrene. Test results indicate that the waste pits are also capable of emitting significant levels of hydrogen sulfide gas into the atmosphere if the waste comes into contact with air. Finally, the groundwater beneath and immediately downgradient of the waste pits is contaminated with benzene, ethylbenzene, and phenol. Contamination in groundwater at the Site is being addressed by EPA as a separate Operable Unit.

B. Waste disposal practices at the Site from the mid-1940's through 1971 resulted in contamination of the Waste Pits Area by the chemicals described in the preceding paragraph. Wastes generated at the Site and disposed of in the unlined pits

and evaporation ponds in the Waste Pits Area include, but are not limited to, aqueous waste, waste styrene, semi-viscous and viscous wastes, aluminum chloride complex wastes (containing large amounts of hydrocarbons), acid sludge (a by-product of the treatment of benzene and sulfuric acid), kaolin clay (used to dehydrate alcohol and produce ethylene), and lime slurry (a by-product of a zeolite softening system).

C. Site investigations indicate that the contaminants have migrated into the soils underneath and adjacent to the waste disposal pits and evaporation ponds and into the groundwater beneath the Waste Pits Area. The former evaporation ponds have been designated as "Pits 1A, 1B, 1C, and the Eastern Evaporation Pond." The former disposal pits have been designated as "Pits 2A, 2B, 2C, 2D, 2E and 2F." All of the series 2 Pits and Pits 1B and 1C are located on Lot 36. Pit 1-A and the Eastern Evaporation Pond are located on Lot 37. Waste was removed from Pit 1-A on Lot 37 in the mid-1980's, but vadose zone soil contamination continues to exist. The waste material in pits 1B and 1C is covered with 2-4 feet of clean soil, and the waste extends down an average of 9 feet. The waste material in the 2-series pits is covered with 3-15 feet of soil fill, and the waste extends down 21 to 32 feet. Beneath several of the pits, contaminated soil extends down to the water table, a depth of approximately 60 feet. The lateral extent of the contaminated soil on Lot 36 is roughly confined within the inner fence that surrounds the pits. The predominant contaminants in the groundwater beneath and immediately downgradient of the pits are benzene (with concentrations as high as 470,000 ppb), ethylbenzene (with concentrations as high as 15,000 ppb) and phenol (with concentrations as high as 440 ppb). The data show a sharp rise in groundwater contamination in the immediate vicinity of the Waste Pits Area as compared with contaminant levels further upgradient, indicating that contaminants from the waste pits are migrating to

and causing significant contamination of the underlying groundwater.

D. Air emissions tests performed at the Waste Pits Area revealed that the waste pits and adjacent contaminated soils are capable of emitting significant levels of benzene and hydrogen sulfide gas into the atmosphere if the waste is disturbed. These emissions are of great concern due to the adverse health effects that could result from exposure to these contaminants. Emissions investigations performed at the Waste Pits Area also found emissions of several VOCs in addition to benzene, including toluene, ethylbenzene and styrene. SVOC emissions included anthracene, chrysene, fluorene, and naphthalene.

E. The exposure pathways of concern for the Waste Pits Area are groundwater exposure and surface exposure. Shell Oil Company and Dow Chemical Company performed a risk assessment for surface exposure, assuming that the people most affected by any hazardous substance releases from the Waste Pits Area would be residents located at the fence line on the south side of the pits, office workers located at the northern fence line, and a maintenance worker on the waste pits themselves. The risk assessment did not quantitatively assess risks associated with contaminated groundwater because the Waste Pits Operable Unit ROD selects an interim action for groundwater. However, the groundwater concentration of benzene (as high as 470,000 ppb) underneath the waste pits significantly exceeds the federal MCL of 5 ppb and the California MCL of 1 ppb.

6. Summary of Site Risks

A. The risk assessment for the Waste Pits Area suggests that the contaminants do not currently pose an unacceptable threat to human health for persons living or working at the ground surface at or near the Waste Pits Area, provided that the

existing controls at the Waste Pits Area (soil fill cover over the waste, double row of chain-link fence, routine inspection and maintenance) and the current emissions rates remain as they are today. However, if the waste pits were disturbed, significant emissions of volatile contaminants, particularly hydrogen sulfide, could be released, which would pose a significant and unacceptable risk to the public. There is substantial uncertainty regarding the reliability of the risk assessment assumption that existing conditions (i.e. fencing) are adequate to prevent human intrusions into the site and potential human incursions into the waste itself. In addition, future development activities, including trenching or excavations (for structures, pipelines or utilities), or natural erosion, such as erosion resulting from major storms, could expose waste material to the surface. Emissions testing of disturbed waste revealed that the waste material can emit significant levels of volatile contaminants, such as hydrogen sulfide gas, benzene and styrene. Acute exposure to these contaminants can cause irritation, dizziness, suffocation, and even death. Consequently, if conditions at the Waste Pits Area were to change, exposures and resultant risks to humans at or in the vicinity of the Waste Pits Area would likely be substantially higher and at unacceptable levels. Indeed, on July 15, 1994, EPA issued a Unilateral Administrative Order to Shell Oil Company following the discovery of small areas of exposed waste in the Waste Pits Area. The Order requires Shell to conduct regular inspections and maintain the Waste Pits Area and in particular, to detect and cover or remove exposed waste material. The Unilateral Administrative Order for inspection and maintenance of the Waste Pits Area remains in effect.

B. The groundwater beneath the Waste Pits Area contains contaminant concentrations in excess of Maximum Contaminant Levels (MCLs) as a direct result of uncontrolled migration of waste pits contamination into the groundwater. Because the groundwater under the Waste Pits Area is classified as a

potential source of drinking water by the State of California, EPA determined that this exceedance of MCLs by the groundwater warrants remedial action to prevent additional migration of contaminants from the Waste Pits Area into the groundwater.

7. The Record of Decision (ROD) for the Del Amo Waste Pits Operable Unit (September 5, 1997) selects a final remedy for the Waste Pits Area addressing potential human exposures to waste pit contaminants at or near the ground surface. The ROD also selects an interim groundwater remedy for the Waste Pits Area by selecting measures to prevent continued migration of hazardous substances from the waste pits or surrounding soil to the groundwater. As summarized in ROD declaration, the major components of the selected remedy include:

- Placement of a RCRA-equivalent cap over the Waste Pits Area as described in this ROD, and associated soil gas monitoring;

- Installation of surface water controls to prevent ponding of water on the cap and to prevent runoff onto adjacent properties;

- Installation and operation of a soil vapor extraction system (SVE) beneath the Waste Pits Area to achieve the interim soil remediation standards established in this ROD;

- Installation of security fencing around the treatment units associated with the cap and the SVE systems;

- Implementation of deed restrictions prohibiting future residential use of the Waste Pits Area and prohibiting any future use of the Waste Pits Area that could threaten the integrity of the RCRA equivalent cap; and

- Long-term operation and maintenance of all of the above and related components of the remedy selected in this ROD."

8. The remedy addresses the risks posed by the release or threat of release hazardous substances as follows:

A. The construction of a RCRA-equivalent cap will result in a permanent cover over the Waste Pits Area that will eliminate the direct contact, ingestion and vapor inhalation pathways of contaminant exposure. The cap also provides a significant physical barrier against human incursions into the waste, and provides some measure of groundwater protection by preventing significant rainwater infiltration through the waste and contaminated soil. The cap's surface water collection and diversion system will prevent ponding of water in the cap and uncontrolled runoff onto adjacent properties, and the cap's vapor collection and treatment system will prevent the emission of unacceptable levels of contaminants into the air.

B. Installation and operation of an SVE system will enhance groundwater protection by removing migrating volatile chemicals from the soil above the water table. This will protect the groundwater aquifer from the downward migration of contaminants that currently exist in the waste and soil, and it will also prevent significant contamination of groundwater caused by a rising water table coming into contact with contaminated soils.

C. Installation of security fencing around the treatment units associated with the cap and the SVE system will prevent unauthorized access or tampering.

D. Deed restrictions prohibiting future residential use of the Waste Pits area will prevent inappropriate future land use or

development. In addition, deed restrictions will prohibit any future use of the Waste Pits Area that could threaten the integrity of the RCRA-equivalent cap.

E. Long-term operation and maintenance of all components of the remedial action will ensure the continued effectiveness of the remedy and ensure that the remedy complies with the ROD requirements at all times.

9. Respondent GSA has indicated its consent to the issuance of this Order. Respondent Shell Oil Company has indicated its willingness to perform the remedial design work (as set out in the attached Statement of Work) pursuant to a CERCLA Unilateral Administrative Order.

III. CONCLUSIONS OF LAW AND DETERMINATIONS

10. The Del Amo Superfund Site, including but not limited to the Waste Pits Area, is a "facility" as defined in section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

11. Each Respondent is a "person" as defined in section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

12. Respondents are "liable parties" as defined in section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and are subject to this Order under section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

13. The substances listed in Section II, Paragraph 5A are found at the Site and are "hazardous substances" as defined in section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

14. The past disposal and subsequent migration of hazardous substances at the Site constitute a "release" as defined in section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

15. These hazardous substances are actually or potentially being released from the Site into the soil, groundwater and air.

16. The potential for future migration of hazardous substances from the Site poses a threat of a "release" as defined in section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

17. The release and threat of release of one or more hazardous substances from the facility may present an imminent and substantial endangerment to the public health or welfare or the environment.

18. The actions required by this Order are necessary to protect the public health or welfare or the environment.

IV. NOTICE TO THE STATE

19. On April 24, 1998, prior to issuing this Order, EPA notified the State of California, Department of Toxic Substances Control, that EPA would be issuing this Order.

V. ORDER

20. Based on the foregoing, Respondents Shell Oil Company and the Dow Chemical Company are hereby ordered to comply with the following provisions and requirements of this Order, including but not limited to all attachments to this Order, all documents incorporated by reference into this Order, and all schedules and deadlines in this Order, attached to this Order, or incorporated by reference into this Order (including, without limitation, the Remedial Design Work Plan). As used in Paragraphs 22 through 66,

71, 77 and 80 as well as in the attached Statement of Work, the term "Respondents" shall mean Shell Oil Company and the Dow Chemical Company. However, the United States and Shell Oil Company have entered into a Settlement Agreement approved and adopted on April 26, 1994, by the United States District Court for the Central District of California in Cadillac Fairview/California Inc. v. Dow Chemical Company, et al, Civil Action Nos. 83-7996 and 83-8034 ("the 4/26/94 Settlement") under which the United States, on behalf of GSA and any other federal agency that may be a liable party under CERCLA at the Waste Pits Area, has agreed to reimburse Shell Oil Company for a portion of the necessary costs of response incurred by Shell at the Waste Pits Area. Respondent GSA shall have no further obligations under this Order beyond the United States' obligations set forth in the 4/26/94 Settlement. Any disputes regarding the 4/26/94 Settlement shall be resolved in accordance with the provisions of the 4/26/94 Settlement, and this Order shall not be construed as amending or altering the 4/26/94 Settlement.

VI. DEFINITIONS

21. Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in the statute or its implementing regulations. Whenever terms listed below are used in this Order or in the documents attached to this Order or incorporated by reference into this Order, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 et seq.

b. "Day" shall mean a calendar day unless expressly stated to be a working day. "Working day" shall mean a day other than a

Saturday, Sunday, or Federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the end of the next working day.

c. "EPA" shall mean the United States Environmental Protection Agency.

d. "DTSC" shall mean the California Environmental Protection Agency, Department of Toxic Substances Control.

e. "National Contingency Plan" or "NCP" shall mean the National Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, including any amendments thereto.

f. "Operation and Maintenance" or "O&M" shall mean all activities required under the Operation and Maintenance Plan developed by Respondents pursuant to this Order and Section 11.8 of the Statement of Work, and approved by EPA.

g. "Paragraph" shall mean a portion of this Order identified by an arabic numeral.

h. "Performance Standards" shall mean those cleanup standards, standards of control, and other substantive requirements, criteria or limitations, identified in the Record of Decision, that the Remedial Action and the Work required by this Order must attain and maintain (including, without limitation, the requirements and specifications identified in pages 38 through 46 of the Record of Decision and in Attachment A to the Record of Decision).

i. "Record of Decision" or "ROD" shall mean the EPA Record of Decision relating to the Del Amo Superfund Site, Del Amo Waste

Pits Operable Unit, signed on September 5, 1997 by the Director, Superfund Division, EPA Region IX, and all attachments thereto.

j. "Remedial Action" or "RA" shall mean those activities, except for Operation and Maintenance, to be undertaken by Respondents to implement the final plans and specifications submitted by Respondents pursuant to the Remedial Design Work Plan approved by EPA.

k. "Remedial Design" or "RD" shall mean those activities to be undertaken by Respondents to develop the final plans and specifications for the Remedial Action pursuant to the Remedial Design Work Plan.

l. "Response Costs" shall mean all costs, including direct costs, indirect costs, enforcement costs and accrued interest incurred by (or on behalf of) EPA to perform or support response actions at the Site. Response costs include but are not limited to the costs of overseeing the Work, such as the costs of reviewing or developing plans, reports and other items pursuant to this Order and costs associated with verifying the Work.

m. "Statement of Work" or "SOW" shall mean the statement of work for implementation of the Remedial Design, as set forth in Attachment 2 to this Order. The Statement of Work is incorporated into this Order and is an enforceable part of this Order.

n. "Section" shall mean a portion of this Order identified by a roman numeral and includes one or more paragraphs.

o. "Site" shall mean the Del Amo Superfund Site, located in the city of Los Angeles California, in a section of the city known as the Harbor Gateway, as described in the Record of Decision.

p. "State" shall mean the State of California.

q. "United States" shall mean the United States of America.

r. "Work" shall mean all activities contemplated under this Order, including Remedial Design.

s. "Work Plan" or "Remedial Design Workplan" or "RD Workplan" shall mean the work plan approved by EPA for Remedial Design at the Site.

VII. NOTICE OF INTENT TO COMPLY

22. Not later than five (5) days after the effective date of this Order, Respondents shall provide (either jointly or separately) written notice to EPA's Remedial Project Manager (RPM) stating whether they will comply with the terms of this Order. Respondents' written notice shall describe, using facts that exist on or prior to the effective date of this Order, any "sufficient cause" defenses asserted by Respondents under sections 106(b) and 107(c)(3) of CERCLA. The absence of a response by EPA to the notice required by this paragraph shall not be deemed to be acceptance of Respondents' assertions.

VIII. PARTIES BOUND

23. This Order shall apply to and be binding upon Respondents their directors, officers, employees, agents, successors, and assigns. No change in the ownership, corporate status, or other control of Respondents shall alter any of the Respondents' responsibilities under this Order.

24. Respondents shall provide a copy of this Order to any prospective owners or successors before a controlling interest in

Respondents' assets, property rights, or stock are transferred to the prospective owner or successor.

25. Respondents shall provide a copy of this Order to each contractor, sub-contractor, laboratory, or consultant retained to perform any Work under this Order, within five (5) days after the effective date of this Order or on the date such services are retained, whichever date occurs later. Respondents shall also provide a copy of this Order to each person representing any Respondents with respect to the Site or the Work and shall condition all contracts and subcontracts entered into hereunder upon performance of the Work in conformity with the terms of this Order. With regard to the activities undertaken pursuant to this Order, each contractor and subcontractor shall be deemed to be related by contract to the Respondents within the meaning of section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3). Notwithstanding the terms of any contract, Respondents are responsible for compliance with this Order and for ensuring that their contractors, subcontractors and agents comply with this Order, and perform any Work in accordance with this Order.

26. Not later than sixty (60) days prior to any transfer of any real property interest in any property included within the Site, Respondent Shell Oil Company shall submit a true and correct copy of the transfer documents to EPA, and shall identify the transferee by name, principal business address and effective date of the transfer.

IX. WORK TO BE PERFORMED

27. Respondents shall cooperate with EPA in providing information regarding the Work to the public. As requested by EPA, Respondents shall participate in the preparation of such information for distribution to the public and in public meetings.

which may be held or sponsored by EPA to explain activities at or relating to the Site.

28. All aspects of the Work to be performed by Respondents pursuant to this Order shall be under the direction and supervision of a qualified project manager the selection of which shall be subject to approval by EPA. Not later than five (5) days after the effective date of this Order, Respondents shall notify EPA in writing of the name and qualifications of the project manager, including primary support entities and staff, proposed to be used in carrying out Work under this Order. If at any time Respondents propose to use a different project manager, Respondents shall notify EPA and shall obtain approval from EPA before the new project manager performs any Work under this Order.

29. EPA will review Respondents' selection of a project manager according to the terms of this paragraph and Section XI of this Order. If EPA disapproves of the selection of the project manager, Respondents shall submit to EPA within thirty (30) days after receipt of EPA's disapproval of the project manager previously selected, a list of project managers, including primary support entities and staff, that would be acceptable to Respondents. EPA will thereafter provide written notice to Respondents of the names of the project managers that are acceptable to EPA. Respondents may then select any approved project manager from that list and shall notify EPA of the name of the project manager selected within twenty-one (21) days of EPA's designation of approved project managers.

30. Within thirty (30) days after the effective date of this Order, Respondents shall submit a draft work plan for the Remedial Design at the Site ("Remedial Design Work Plan" or "RD Work Plan") to EPA for review and approval. The draft RD Work

Plan shall include a step-by-step plan for completing the remedial design for the remedy described in the ROD and for attaining and maintaining all requirements, including Performance Standards, identified in the ROD. The draft RD Work Plan must describe in detail the tasks and deliverables Respondents will complete during the remedial design phase, and a schedule for completing the tasks and deliverables in the draft RD Work Plan. The major tasks and deliverables described in the draft RD Work Plan shall include, but not be limited to, the following:

(1) project status reports; (2) a site health and safety plan; (3) a preliminary design; (4) a pre-final design; (5) a final design; (6) a site management plan (including an RD Contingency Plan); (7) a sampling and analysis plan; (8) a data evaluation report; (9) a pilot test work plan; and (10) a pilot test report. The health and safety plan shall conform to the applicable Occupational Safety and Health Administration and EPA requirements, including, but not limited to, 40 CFR section 300.150 and 29 CFR section 1910.120. EPA may waive the pilot test requirement if adequate justification for a waiver is provided by Respondents in the draft RD Work Plan or through a procedure defined in the final RD Work Plan.

31. The RD Work Plan shall be consistent with, and shall provide for implementing the Statement of Work, and shall comport with EPA's "Remedial Design/Remedial Action (RD/RA) Handbook, OSWER Guidance 9355.0-04B." Upon approval by EPA, the RD Work Plan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order.

32. Upon approval of the RD Work Plan by EPA, Respondents shall implement the RD Work Plan according to the schedule in the approved RD Work Plan. Any violation of the approved RD Workplan shall be a violation of this Order. Unless otherwise directed by EPA, Respondents shall not perform further Work at the Site prior to EPA's written approval of the RD Work Plan.

33. Within ninety (90) days after EPA approves the RD Work Plan, Respondents shall submit a Preliminary Design to EPA for review and approval. The Preliminary Design submittal shall include, at a minimum, the following: (1) design criteria; (2) project delivery strategy and scheduling; (3) preliminary construction schedule; (4) specifications outline; (5) preliminary drawings; (6) basis of design; (7) easement and access requirements; and (8) value engineering screening.

34. The Order and the attached Statement of Work do not currently contemplate the submission of Intermediate Design deliverables. However, if EPA concludes that Intermediate Design deliverables are required in order to enable EPA to effectively oversee the Remedial Design, Respondents shall submit such Intermediate Design deliverables within thirty (30) days of EPA's notice that such additional deliverables are required.

35. Within one hundred fifty (150) days after EPA approves the Preliminary Design, Respondents shall submit a Pre-Final Design to EPA for review and approval. The Pre-Final Design submittal shall include, at a minimum, the following: (1) pre-final specifications; (2) pre-final drawings; (3) pre-final basis of design; (4) pre-final project delivery strategy and scheduling (5) a draft Operation and Maintenance Manual (including a draft compliance monitoring plan directed at measuring progress towards meeting performance standards); and (6) a draft Construction Quality Assurance Plan (CQAP). The CQAP shall describe the approach to quality assurance during construction activities at the Site and shall specify a quality assurance official (QA Official), independent of the construction contractor, to conduct a quality assurance program during the construction phase of the project.

36. Within thirty (30) days after EPA approves the Pre-Final Design, Respondents shall submit a Final Design to EPA for review and approval. The Final Design submittal shall include, at a minimum, the following: (1) final specifications; (2) final drawings; (3) final basis of design; (4) final project delivery strategy and schedule; (5) report of value engineering modifications (if any); (6) final draft Operation and Maintenance Manual; and (7) final Construction Quality Assurance Plan (CQAP).

37. Upon EPA approval of the Final Design, EPA shall issue to Respondents a "Notice of Completion" indicating that the work required by this Order has been completed in accordance with the provisions of this Order. However, this Notice of Completion shall not in any way limit or curtail modification of the Final Design, during and after construction of the remedial action, as necessary in the opinion of EPA to, among other things, meet the performance objectives and standards established in the Waste Pits ROD (or subsequent ROD amendment or other decision document), comply with ARARs established by the ROD or to protect the public health or welfare or the environment.

38. Notwithstanding any action by EPA, Respondents remain fully responsible for achievement of the Performance Standards in the Record of Decision. Nothing in this Order, or in the Statement of Work, or in EPA's approval of the Remedial Design or any other submission, shall be deemed to constitute a warranty or representation of any kind by EPA that full performance of the Remedial Design will achieve the Performance Standards set forth in the ROD. Respondents' compliance with submissions approved by EPA does not foreclose EPA from seeking additional work to achieve the applicable Performance Standards.

X. FAILURE TO ATTAIN PERFORMANCE STANDARDS

39. In the event that EPA determines that additional response activities are necessary to meet applicable Performance Standards, EPA may require Respondents to perform additional remedial design activities. Unless otherwise stated by EPA, within thirty (30) days of receipt of notice from EPA that additional response activities are necessary to meet any applicable Performance Standards, Respondents shall submit for approval by EPA a work plan for additional remedial design activities. The plan shall conform to the applicable requirements of sections IX, XII, and XV of this Order. Upon EPA's approval of the plan pursuant to Section XII, Respondents shall implement the plan for additional remedial design activities in accordance with the provisions and schedule contained therein.

XI. ENDANGERMENT AND EMERGENCY RESPONSE

40. In the event of any action or occurrence during the performance of the Work which causes or threatens to cause a release of a hazardous substance or which may present an immediate threat to public health or welfare or the environment, Respondent Shell Oil Company shall immediately take all appropriate action to prevent, abate, or minimize the threat, and shall immediately notify EPA's Remedial Project Manager (RPM) or, if the RPM is unavailable, EPA's Alternate RPM. If neither of these persons is available, Respondent Shell Oil Company shall notify EPA's Section Chief. If neither the RPM, the Alternate RPM, nor the Section Chief is available, Respondent Shell Oil Company shall notify the EPA Emergency Response Section, Region IX. Respondent Shell Oil Company shall take such action in consultation with EPA's RPM and in accordance with all applicable provisions of this Order, including but not limited to the Health and Safety Plan and the RD Contingency Plan. In the event that

Respondent Shell Oil Company fails to take appropriate response action as required by this Section, and EPA takes that action instead, EPA reserves the right to bring an action under Section 107 of CERCLA, 42 U.S.C. section 9607, for the recovery of all costs not inconsistent with the NCP. Section XVI of this order identifies the EPA RPM, Alternate RPM and Section Chief and describes the procedure for changing these designations.

41. Nothing in the preceding paragraph shall be deemed to limit any authority of the United States to take, direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances on, at, or from the Site.

XII. EPA REVIEW OF SUBMISSIONS

42. After review of any deliverable, plan, report or other item which is required to be submitted for review and approval pursuant to this Order, EPA may: (a) approve the submission; (b) approve the submission with modifications; (c) disapprove the submission and direct Respondents to re-submit the document after incorporating EPA's comments; or (d) disapprove the submission and assume responsibility for performing all or any part of the response action. As used in this Order, the terms "approval by EPA," "EPA approval," or a similar term means the action described in paragraphs (a) or (b) of this paragraph.

43. In the event of approval or approval with modifications by EPA, Respondents proceed to take any action required by the plan, report, or other item, as approved or modified by EPA.

44. Upon receipt of a notice of disapproval and a request for a modification, Respondents shall, within fifteen (15) days or such longer time as specified by EPA in its notice of disapproval or request for modification, correct the deficiencies and resubmit

the plan, report, or other item for approval. Notwithstanding the notice of disapproval, or approval with modifications, Respondents shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission.

45. If any submission is disapproved by EPA, shall be deemed to be in violation of this Order.

XIII. PROGRESS REPORTS

46. In addition to the other deliverables set forth in this Order, Respondents shall provide monthly progress reports to EPA with respect to actions and activities undertaken pursuant to this Order. The progress reports shall be submitted on or before the tenth (10th) day of each month following the effective date of this Order. At a minimum these progress reports shall: (1) describe the actions which have been taken to comply with this Order during the prior month; (2) describe all work planned for the next three months with schedules relating such work to the overall project schedule for RD completion; and (3) describe all problems encountered with the overall implementation of this Order and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

XIV. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

47. Respondents shall use the quality assurance, quality control, and chain of custody procedures described in the "EPA NEIC Policies and Procedures Manual," May 1978, revised May 1986, (EPA-330/9-78-001-R); EPA's "Guidelines and Specifications for Preparing Quality Assurance Program Documentation," June 1, 1987; EPA's "Data Quality Objective Guidance," (EPA/540/G87/003 and 004); EPA's "Guidance for Data Quality Objectives (DQO) Process," September 1994 (EPA QA/G-4); "Preparation of a U.S. EPA Region 9

Field Sampling Plan for Private and State-Lead Superfund Project," August 1993 (EPA QAMS DCN 9QA-06-93); USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Inorganic Data Review," February 1994 (EPA 540/R-94/013); "USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review," February 1994 (EPA 540/R-94/012); and any amendments to these documents, while conducting all sample collection and analysis activities required herein by any plan. To provide quality assurance and maintain quality control, Respondents shall:

- a. Use only laboratories which have a documented Quality Assurance Program that complies with EPA guidance document QAMS-005/80.
 - b. Ensure that the laboratory used by the Respondents for analyses, performs according to a method or methods deemed satisfactory to EPA and submits all protocols to be used for analyses to EPA at least fifteen (15) days before beginning analysis.
 - c. Ensure that EPA personnel and EPA's authorized representatives are allowed access to the laboratory and personnel utilized by the Respondents for analyses.
48. Respondents shall notify EPA not less than fourteen (14) days in advance of any sample collection activity. At the request of EPA, Respondents shall allow split or duplicate samples to be taken by EPA or its authorized representatives, of any samples collected by Respondents with regard to the Site or pursuant to the implementation of this Order. In addition, EPA shall have the right to take any additional samples that EPA deems necessary.

XV. COMPLIANCE WITH APPLICABLE LAWS

49. All activities by Respondents pursuant to this Order shall be performed in accordance with or designed to comply with the requirements of all Federal and state laws and regulations, including, but not limited to the applicable or relevant and appropriate requirements (ARARs) and other laws identified in Attachment A to the ROD. EPA has determined that the activities contemplated by this Order will be consistent with the National Contingency Plan (NCP).

50. Except as provided in section 121(e) of CERCLA and the NCP, no permit shall be required for any portion of the Work conducted entirely on-Site. Where any portion of the Work requires a Federal or state permit or approval, Respondents shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.

51. This Order is not, and shall not be construed to be, a permit issued pursuant to any Federal or state statute or regulation.

52. All materials removed from the Site shall be disposed of or treated at a facility approved by EPA's RPM and in accordance with section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3); with the requirements for the off-site management of CERCLA hazardous substances set forth in 40 CFR 300.440; and with all other applicable Federal, state, and local requirements.

XVI. REMEDIAL PROJECT MANAGER

53. All communications, whether written or oral, from Respondents to EPA shall be directed to EPA's Remedial Project Manager or, if the RPM is unavailable, EPA's Alternate Remedial Project Manager. If neither of these persons is available, Respondents shall direct their communications to the EPA Section

Chief. Respondents shall submit to EPA three copies of all documents, including plans, reports, and other correspondence, which are developed pursuant to this Order, and shall send these documents by overnight mail, unless otherwise specified by the RPM. At EPA's request, one or more of these copies shall be sent directly to the EPA support contractor for this project.

EPA's Remedial Project Manager is:

Dante Rodriguez
Remedial Project Manager
U.S. Environmental Protection Agency
75 Hawthorne Street (SFD 7-1)
San Francisco, CA 94105
(415) 744-2239

EPA's Alternate Remedial Project Manager is:

Jeff Dhont
Remedial Project Manager
U.S. Environmental Protection Agency
75 Hawthorne Street (SFD 7-1)
San Francisco, CA 94105
(415) 744-2339

EPA's Section Chief is:

Michael Montgomery
Chief, Arizona/California Cleanup Section
U.S. Environmental Protection Agency
75 Hawthorne Street (SFD 7-1)
San Francisco, CA 94105
(415) 744-2362

54. EPA has the unreviewable right to change its Remedial Project Manager, Alternate Remedial Project Manager, or Section Chief. If EPA changes its Remedial Project Manager, Alternate Remedial Project Manager, or Section Chief, EPA will inform Respondents in writing of the name, address, and telephone number of the new Remedial Project Manager, Alternate Remedial Project Manager, or Section Chief.

55. EPA's RPM, Alternate RPM, and Section Chief shall have the authority lawfully vested in a Remedial Project Manager (RPM) and On-Scene Coordinator (OSC) by the National Contingency Plan, 40 C.F.R. Part 300. EPA's RPM, Alternate RPM, or Section Chief shall have authority, consistent with the National Contingency Plan, to halt any work required by this Order, and to take any necessary response action.

56. Within five (5) days after the effective date of this Order, Respondents shall designate a Project Coordinator and shall submit the name, address, and telephone number of the Project Coordinator to EPA for review and approval. Respondents' Project Coordinator shall be responsible for overseeing Respondents' implementation of this Order. If Respondents wish to change their Project Coordinator, Respondents shall provide written notice to EPA, five (5) days prior to changing the Project Coordinator, of the name and qualifications of the new Project Coordinator. Respondents' selection of a Project Coordinator shall be subject to EPA approval.

XVII. ACCESS TO SITE NOT OWNED BY RESPONDENTS

57. If the Site, the off-Site area that is to be used for access, property where documents required to be prepared or maintained by this Order are located, or other property subject to or affected by the clean up, is owned in whole or in part by parties other than those bound by this Order, Respondents shall obtain, or use their best efforts to obtain, site access agreements from the present owners within sixty (60) days of the effective date of this Order. Such agreements shall provide access for EPA, its contractors and oversight officials, the state and its contractors, and Respondents or Respondents' authorized representatives and contractors, and such agreements shall specify that Respondents are not EPA's representatives with respect to liability associated with Site activities. Copies of

such agreements shall be provided to EPA prior to Respondents' initiation of field activities. Respondents' best efforts shall include providing reasonable compensation to any off-Site property owner. If access agreements are not obtained within the time referenced above, Respondents shall immediately notify EPA of their failure to obtain access. Subject to EPA's non-reviewable discretion, EPA may use its legal authorities to obtain access for the Respondents, may perform those response actions with EPA contractors at the property in question, or may terminate the Order if Respondents cannot obtain access agreements. If EPA performs those tasks or activities with contractors and does not terminate the Order, Respondents shall perform all other activities not requiring access to that property. Respondents shall integrate the results of any such tasks undertaken by EPA into their reports and deliverables. EPA reserves the right to bring an action against Respondents under section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of all response costs (including attorney fees) incurred by EPA to obtain access for Respondents and to perform response actions at the property.

XVIII. SITE ACCESS AND DATA/DOCUMENT AVAILABILITY

58. Respondents shall allow EPA and its authorized representatives and contractors to enter and freely move about all property at the Site and off-Site areas subject to or affected by the work under this Order or where documents required to be prepared or maintained by this Order are located, for the purposes of inspecting conditions, activities, the results of activities, records, operating logs, and contracts related to the Site or Respondents and their representatives or contractors pursuant to this Order; reviewing the progress of the Respondents in carrying out the terms of this Order; conducting tests as EPA or its authorized representatives or contractors deem necessary; using a camera, sound recording device or other documentary type

equipment; and verifying the data submitted to EPA by Respondents. Respondents shall allow EPA and its authorized representatives to enter the Site, to inspect and copy all records, files, photographs, documents, sampling and monitoring data, and other writings related to work undertaken in carrying out this Order. Nothing herein shall be interpreted as limiting or affecting EPA's right of entry or inspection authority under Federal law.

59. Respondents may assert a claim of business confidentiality covering part or all of the information submitted to EPA pursuant to the terms of this Order under 40 C.F.R. § 2.203, provided such claim is not inconsistent with section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7) or other provisions of law. This claim shall be asserted in the manner described by 40 C.F.R. § 2.203(b) and substantiated by Respondents at the time the claim is made. Information determined to be confidential by EPA will be given the protection specified in 40 C.F.R. Part 2. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA or the state without further notice to the Respondents. Respondents shall not assert confidentiality claims with respect to any data related to Site conditions, sampling, or monitoring.

60. Respondents shall maintain for the period during which this Order is in effect, an index of documents that Respondents claim contain confidential business information. The index shall contain, for each document, the date, author, addressee, and subject of the document. Upon written request from EPA, Respondents shall submit a copy of the index to EPA.

XIX. RECORD PRESERVATION

61. Respondents shall provide to EPA upon request, copies of all documents and information within their possession and/or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Order, including but not limited to sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondents shall also make available to EPA for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

62. Until ten (10) years after EPA provides written notice to the Respondents that the Work has been completed, each Respondent shall preserve and retain all records and documents in its possession or control, including the documents in the possession or control of their contractors and agents on and after the effective date of this Order that relate in any manner to the Site. At the conclusion of this document retention period, Respondents shall notify the United States at least ninety (90) calendar days prior to the destruction of any such records or documents, and upon request by the United States, Respondents shall deliver any such records or documents to EPA.

63. Until ten (10) years after EPA provides notice pursuant to paragraph 62 of this Order, Respondents shall preserve, and shall instruct their contractors and agents to preserve, all documents, records, and information of whatever kind, nature or description relating to the performance of the Work.

64. Upon the conclusion of the document retention period established in Paragraph 63 above, Respondents shall notify the

United States at least ninety (90) days prior to the destruction of any such records, documents or information, and, upon request of the United States, Respondents shall deliver all such documents, records and information to EPA.

XX. DELAY IN PERFORMANCE

65. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondents under the terms of this paragraph shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondents' obligations to fully perform all obligations under the terms and conditions of this Order.

66. Respondents shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to EPA's RPM, Alternate RPM, or Section Chief within forty eight (48) hours after Respondents first knew or should have known that a delay might occur. Respondents shall adopt all reasonable measures to avoid or minimize any such delay. Within five (5) business days after notifying EPA by telephone, Respondents shall provide written notification fully describing the nature of the delay, any justification for delay, any reason why Respondents should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Increased costs or expenses associated with implementation of the activities called for in this Order is not a justification for any delay in performance.

XXI. MODIFICATIONS

67. This Order may be amended or modified by EPA. Such amendment or modification shall be in writing and shall be signed by the Director, Superfund Division, U.S. EPA Region IX.

68. The EPA RPM, or, in his absence, the Alternate RPM or Section Chief, may agree to changes in any approved plan or schedule. Any such changes must be requested in writing by Respondents and be approved in writing by the EPA RPM, or, in his absence, the Alternate RPM or Section Chief.

69. All modification requests submitted pursuant to this Section shall be sent by certified mail, return receipt requested, and addressed to the following:

one copy to: Dante Rodriguez
Remedial Project Manager
U.S. Environmental Protection Agency
75 Hawthorne Street (SFD 7-1)
San Francisco, CA 94105
(415) 744-2239

one copy to: Carmen Gonzalez
Assistant Regional Counsel
Office of Regional Counsel
U.S. Environmental Protection Agency
75 Hawthorne Street (ORC 3)
San Francisco, CA 94105
(415) 744-1400

70. No informal advice, guidance, suggestions or comments by EPA regarding reports, plans, specifications, schedules, or any other writing submitted by Respondents shall relieve Respondents of their obligation to obtain such formal approval as may be required by this Order, and to comply with all applicable requirements of this Order unless it is formally modified.

XXII. ASSURANCE OF ABILITY TO PERFORM WORK

71. At least seven (7) days prior to commencing any work at the Site pursuant to this Order, Respondents shall submit to EPA a certification that Respondents or their contractors and subcontractors have adequate insurance coverage or have indemnification for liabilities for injuries or damages to persons or property which may result from the activities to be conducted by or on behalf of Respondents pursuant to this Order. Respondents shall ensure that such insurance or indemnification is maintained for the duration of the Work required by this Order.

XXIII. EPA NOT LIABLE

72. EPA, by issuance of this Order, assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondents, or their directors, officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order. EPA shall not be deemed a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order.

XXIV. ENFORCEMENT AND RESERVATIONS

73. EPA reserves the right to bring an action against Respondent Shell Oil Company and/or Respondent Dow Chemical Company under section 107 of CERCLA, 42 U.S.C. § 9607, or to assert an administrative claim against Respondent GSA, for recovery of any response costs incurred by EPA related to this Order or to the Site (including but not limited to the Waste Pits Area). This

reservation shall include but not be limited to past costs, direct costs, indirect costs, the costs of oversight, the costs of compiling the cost documentation to support oversight cost demand, as well as accrued interest as provided in section 107(a) of CERCLA.

74. Notwithstanding any other provision of this Order, at any time during the response action, EPA may perform its own studies, or elect to complete the response action (or any portion of the response action) as provided in CERCLA and the NCP, and seek reimbursement from Respondents for its costs, or seek any other appropriate relief.

75. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional Orders, and/or additional remedial or removal actions as EPA may deem necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA, 42 U.S.C. § 9606(a), et seq., or any other applicable law.

76. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA and any other applicable statutes or regulations.

77. EPA reserves the right to seek to compel enforcement of this Order and to collect civil penalties under section 106(b) of CERCLA, 42 U.S.C. § 9606(b), of not more than \$25,000 for each day in which Respondents willfully violate, or fail or refuse to comply with this Order without sufficient cause. In addition, failure to properly provide response action under this Order, or any portion hereof, without sufficient cause, may result in liability under section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), for punitive damages in an amount at least equal

to, and not more than three times the amount of any costs incurred by the Fund as a result of such failure to take proper action.

78. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person for any liability it may have arising out of or relating in any way to the Site.

79. If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all applicable provisions of this Order not invalidated by the court's order.

XXV. ADMINISTRATIVE RECORD

80. Upon request by EPA, Respondents must submit to EPA all technical documents produced in complying with this Order for possible inclusion in the administrative record file.

XXVI. EFFECTIVE DATE AND COMPUTATION OF TIME

81. This Order shall be effective twenty-one (21) days after the Order is signed by the Director, Superfund Division, U.S. EPA Region IX. All times for performance of ordered activities shall be calculated from this effective date.

XXIX. OPPORTUNITY TO CONFER

82. Respondents may, within ten (10) days after the date this Order is signed, request a conference to discuss this Order with EPA at its Region IX offices located at 75 Hawthorne Street in San Francisco, California. If requested, the conference shall occur on May 19, 1998 at 1 pm at 75 Hawthorne Street, San

Francisco, California. Only one conference will be held with Respondents with respect to this order.

83. The purpose and scope of the conference shall be limited to issues involving the implementation of the Work required by this Order and the extent to which Respondents intend to comply with this Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondents a right to seek review of this Order, or to seek resolution of potential liability, and no official stenographic record of the conference will be made. At any conference held pursuant to Respondents' request, Respondents may appear in person or by an attorney or other representative. Regardless of whether a conference is held, Respondents may submit any information, arguments or comments in writing to EPA within two (2) business days following the conference, or within seven (7) business days after the Order is signed if no conference is requested.

84. Requests for a conference must be by telephone followed by written confirmation mailed that day to Carmen Gonzalez, Assistant Regional Counsel at (415) 744-1400, EPA Region IX, 75 Hawthorne Street, Mail Code ORC3, San Francisco, California 94105

So Ordered, this 5th day of May, 1998.

BY: Keith Takata

Keith Takata, Director
Superfund Division
U.S. Environmental Protection Agency
Region IX