

**RECORD OF WRITTEN COMMUNICATIONS BETWEEN SWM AND RWCB DURING DEVELOPMENT OF THE DTR
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TAB DATE	BATES NO.	DOC_TYPE	SUBJECT	FROM	FM_ORG	TO	TO_ORG
164 20000307	SAR035040	Letter	Receipt of Monitoring Reports Required by Order No. 97-36; General NPDES Permit No. CAG039001, Waste Discharge Requirements for Discharges from Ship Construction, Modification, Repair, and Maintenance Facilities and Activities Located in the San Diego Region (TTWQ/CPLX 1/A); WDID No. 9 000000137	Robertus, John H.	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
165 20000324	SAR034965	Letter	Compliance Certification Report, 02/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
166 20000403	SAR063066	E-mail	Remediation Costs at Various Cleanup Levels	Halvax, Sandor	Southwest Marine, Inc.	Rodriguez, Vincent	San Diego RWQCB
167 20000428	SAR015203	Video	Quarterly Report, 01/2000 - 03/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
168 20000428	SAR015205	Video	Quarterly Report, 01/2000 - 03/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
169 20000428	SAR015206	Letter	Quarterly Report, 01/2000 - 03/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
170 20000428	SAR015207	Report or Study	Quarterly Report, 01/2000 - 03/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
171 20000710	SAR035045	Letter	Receipt of Monitoring Reports Required by Order No. 97-36; General NPDES Permit No. CAG039001, Waste Discharge Requirements for Discharges from Ship Construction, Modification, Repair, and Maintenance Facilities and Activities Located in the San Diego Region (TTWQ/CPLX 1/A); WDID No. 9 000000137	Robertus, John H.	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.

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172	20000710	SAR035057	Letter	Receipt of Monitoring Reports Required by Order No. 97-36; General NPDES Permit No. CAG039001, Waste Discharge Requirements for Discharges from Ship Construction, Modification, Repair, and Maintenance Facilities and Activities Located in the San Diego Region (TTWQ/CPLX 1/A); WDID No. 9 000000137	Robertus, John H.	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
173	20000721	SAR034860	Video	Semi Annual Report, 01/2000 - 06/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
174	20000721	SAR034862	Video	Semi Annual Report, 01/2000 - 06/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
175	20000721	SAR034863	Video	Semi Annual Report, 01/2000 - 06/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
176	20000721	SAR034866	Video	Semi Annual Report, 01/2000 - 06/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
177	20000721	SAR034867	Video	Semi Annual Report, 01/2000 - 06/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
178	20000721	SAR034869	Video	Semi Annual Report, 01/2000 - 06/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
179	20000731	SAR034870	Letter	Semi Annual Report, 01/2000 - 06/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
180	20000731	SAR034871	Report or Study	Semi Annual Report, 01/2000 - 06/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB

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181 20000822	SAR035035	Letter	Receipt of Monitoring Reports Required by Order No. 97-36; General NPDES Permit No. CAG039001, Waste Discharge Requirements for Discharges from Ship Construction, Modification, Repair, and Maintenance Facilities and Activities Located in the San Diego Region (TTWQ/CPLX 1/A); WDID No. 9 000000137	Robertus, John H.	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
182 20000822	SAR035047	Letter	Receipt of Monitoring Reports Required by Order No. 97-36; General NPDES Permit No. CAG039001, Waste Discharge Requirements for Discharges from Ship Construction, Modification, Repair, and Maintenance Facilities and Activities Located in the San Diego Region (TTWQ/CPLX 1/A); WDID No. 9 000000137	Robertus, John H.	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
183 20000831	SAR034976	Report or Study	ref2000.xls, Annual Marine Sediment Monitoring Report, 08/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
184 20000831	SAR034982	Report or Study	StaSwm00wp.doc, Annual Marine Sediment Monitoring Report, 08/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
185 20000831	SAR035002	Report or Study	swm2000.xls, Annual Marine Sediment Monitoring Report, 08/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
186 20000831	SAR035020	Report or Study	swm2000reportMSW.doc, Annual Marine Sediment Monitoring Report, 08/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB

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187 20000905	SAR034974	Letter	Annual Marine Sediment Monitoring Report, 08/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
188 20000905	SAR034975	Disc	Annual Marine Sediment Monitoring Report, 08/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
189 20000914	SAR035270	Report or Study	Inspection Report	Richter, Paul J.	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
190 20000925	SAR065684	Letter	Sediment Toxicity Work Plan	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
191 20000925	SAR065685	Report or Study	Sediment Toxicity Work Plan	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
192 20000929	SAR063070	Letter	Tentative Resolution No. 2000-123 with Technical Report	Barker, David (DTB)	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
193 20000929	SAR063071	Report or Study	Tentative Resolution No. 2000-123 with Technical Report	Barker, David (DTB)	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
194 20000929	SAR063074	Report or Study	Tentative Resolution No. 2000-123 with Technical Report	Barker, David (DTB)	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
195 20000929	SAR063177	Report or Study	Tentative Resolution No. 2000-123 with Technical Report	Barker, David (DTB)	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
196 20001030	SAR034937	Report or Study	Quarterly Report 07/2000 - 09/2000	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
197 20001121	SAR035037	Letter	Receipt of Monitoring Reports Required by Order No. 97-36; General NPDES Permit No. CAG039001, Waste Discharge Requirements for Discharges from Ship Construction, Modification, Repair, and Maintenance Facilities and Activities Located in the San Diego Region (TTWQ/CPLX 1/A); WDID No. 9 000000137	McCann, Mike	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.

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198	20001121	SAR035052	Letter	Receipt of Monitoring Reports Required by Order No. 97-36; General NPDES Permit No. CAG039001, Waste Discharge Requirements for Discharges from Ship Construction, Modification, Repair, and Maintenance Facilities and Activities Located in the San Diego Region (TTWQ/CPLX 1/A); WDID No. 9 000000137	McCann, Mike	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
199	20001219	SAR035055	Letter	Receipt of Monitoring Reports Required by Order No. 97-36; General NPDES Permit No. CAG039001, Waste Discharge Requirements for Discharges from Ship Construction, Modification, Repair, and Maintenance Facilities and Activities Located in the San Diego Region (TTWQ/CPLX 1/A); WDID No. 9 000000137	McCann, Mike	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
200	20010111	SAR065807	Letter	Request for Information on Shipyard Sediment Cleanup	Robertus, John	San Diego RWQCB	Southwest Marine, Inc.
201	20010130	SAR037089	Video	Semi-Annual / Quarterly Report (07/2000 - 12/2000)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
202	20010130	SAR037090	Video	Semi-Annual / Quarterly Report (07/2000 - 12/2000)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
203	20010130	SAR037091	Video	Semi-Annual / Quarterly Report (07/2000 - 12/2000)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
204	20010130	SAR037092	Video	Semi-Annual / Quarterly Report (07/2000 - 12/2000)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
205	20010130	SAR037093	Letter	Semi-Annual / Quarterly Report (07/2000 - 12/2000)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB

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206	20010130	SAR037095	Report or Study	Semi-Annual / Quarterly Report (07/2000 - 12/2000)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
207	20010226	SAR066096	Letter	Adoption of Resolution No. 2001-0003 for SWM Shipyard	Barker, David (DTB)	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
208	20010226	SAR066097	Other	Adoption of Resolution No. 2001-0003 for SWM Shipyard	Robertus, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
209	20010327	SAR037147	Letter	Spill illicit Discharge Log, July - October Quarterly Monitoring Report, 11/2000, 12/2000, & 02/2001 Monthly Monitoring Reports, and Semi-Annual Waste Hauling Log; Order No. 97-36; NPDES Permit No. CAG039001; Facility: Southwest Marine, Inc.; WDID No. 9 000000137	Phillips, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
210	20010418	SAR065576	Letter	Request for Suspension of Sediment Monitoring Requirements for Order No. 97-36	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
211	20010427	SAR036883	Video	Quarterly Report (01/2001 - 03/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
212	20010427	SAR036885	Video	Quarterly Report (01/2001 - 03/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
213	20010427	SAR036886	Video	Quarterly Report (01/2001 - 03/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
214	20010427	SAR036889	Video	Quarterly Report (01/2001 - 03/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
215	20010427	SAR036890	Video	Quarterly Report (01/2001 - 03/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
216	20010427	SAR036892	Video	Quarterly Report (01/2001 - 03/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
217	20010427	SAR036893	Video	Quarterly Report (01/2001 - 03/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB
218	20010427	SAR036896	Video	Quarterly Report (01/2001 - 03/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H. San Diego RWQCB

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219	20010427	Letter	Quarterly Report (01/2001 - 03/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
220	20010427	Report or Study	Quarterly Report (01/2001 - 03/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
221	20010508	Letter	Spill Illicit Discharge Log, January - March and 03/2001 Monthly Compliance Certification; Order No. 97-36; NPDES Permit No. CAG039001; Facility: Southwest Marine, Inc.; WDID No. 9 000000137	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
222	20010514	Letter	Compliant No. 2001-0138, Administrative Civil Liability	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
223	20010514	Other	Compliant No. 2001-0138, Administrative Civil Liability	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
224	20010514	Report or Study	Compliant No. 2001-0138, Administrative Civil Liability	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
225	20010514	Other	Compliant No. 2001-0138, Administrative Civil Liability	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
226	20010514	Report or Study	Compliant No. 2001-0138, Administrative Civil Liability	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
227	20010514	Report or Study	Compliant No. 2001-0138, Administrative Civil Liability	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
228	20010514	Report or Study	Compliant No. 2001-0138, Administrative Civil Liability	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
229	20010601	Letter	Assessment and Remediation of Contaminated Sediments in San Diego Bay	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
230	20010601	Report or Study	Assessment and Remediation of Contaminated Sediments in San Diego Bay	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
231	20010607	Letter	Southwest Marine Comments on Proposed ACL	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB

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232 20010607	SAR051093	Report or Study	Southwest Marine Comments on Proposed ACL	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
233 20010611	SAR037151	Letter	04/2001 Monthly Compliance Certification Report; Order No. 97-36; NPDES Permit No. CAG039001; Facility: Southwest Marine, Inc.; W DID No. 9 000000137	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
234 20010613	SAR065571	Order	ACL Order No. 2001-139	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
235 20010614	SAR051050	Letter	Administrative Assessment of Civil Liability Order No. 2001-0139	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
236 20010614	SAR051052	Order	Administrative Assessment of Civil Liability Order No. 2001-0139	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
237 20010614	SAR065563	Letter	ACL Order No. 2001-139	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
238 20010628	SAR037207	Letter	Response to Request for Suspension of Sediment Monitoring	Robertus, John H.	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
239 20010628	SAR051012	Letter	Sediment Monitoring for Order No. 97-36	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
240 20010628	SAR065573	Letter	Suspension of Sediment Monitoring Requirements for Order No. 97-36	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
241 20010706	SAR037192	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
242 20010711	SAR065638	Letter	Assessment and Remediation of Contaminated Sediments in San Diego Bay	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
243 20010720	SAR065659	Letter	Comments on Exponent's Technical Memorandum, Dated 07/13/2001	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
244 20010730	SAR036961	Video	Semi-Annual / Quarterly Report (01/2001 - 06/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
245 20010730	SAR036962	Video	Semi-Annual / Quarterly Report (01/2001 - 06/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB

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246	20010730	Video	Semi-Annual / Quarterly Report (01/2001 - 06/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
247	20010730	Video	Semi-Annual / Quarterly Report (01/2001 - 06/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
248	20010730	Letter	Semi-Annual / Quarterly Report (01/2001 - 06/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
249	20010730	Report or Study	Semi-Annual / Quarterly Report (01/2001 - 06/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
250	20010731	Letter	Payment of ACL Order No. 2001-0139	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
251	20010731	Other	Payment of ACL Order No. 2001-0139	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
252	20010731	Other	Payment of ACL Order No. 2001-0139	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
253	20010731	Other	Payment of ACL Order No. 2001-0139	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
254	20010731	Other	Payment of ACL Order No. 2001-0139	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
255	20010816	E-mail	Follow-up Meeting to 08/31/2001 Workshop	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Sandor	NASSCO; Southwest Marine, Inc.
256	20010823	Letter	January - June 2001 Semi-Annual Monitoring Report, April - June 2001 Quarterly Monitoring Report; Order No. 97-36; NPDES Permit No. CAG039001; Facility: Southwest Marine, Inc.; WDID No. 9 000000137	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
257	20010824	Memorandum to File	Assessment of Aquatic-Dependent Wildlife Risks at Shipyard Sediment Site	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
258	20010830	Letter	07/2000 - 06/2001 Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB

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259	20010830	SAR037229	Report or Study 07/2000 - 06/2001 Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
260	20010906	SAR037156	Letter 07/2001 Monthly Compliance Certification Report; Order No. 97-36; NPDES Permit No. CAG039001; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
261	20010918	SAR037154	Letter 07/2000 - 06/2001 Spill Illicit Discharge Summary Report; Annual Report Monitoring Reports; Storm Water Annual Report; Annual Effluent Monitoring Reports; Chemical Utilization Audit; Technical Report Update; and Material Safety Data Sheet; Order No. 97-36; NPDES Permit No. CAG039001; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
262	20011005	SAR065671	Letter Reimbursement of Costs for Cleanup and Abatement Oversight	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
263	20011009	SAR037157	Letter 08/2001 Monthly Compliance Certification Report; Order No. 97-36; NPDES Permit No. CAG039001; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
264	20011029	SAR036865	Video Quarterly Report (07/2001 - 09/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
265	20011029	SAR036868	Video Quarterly Report (07/2001 - 09/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
266	20011029	SAR036869	Video Quarterly Report (07/2001 - 09/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
267	20011029	SAR036873	Video Quarterly Report (07/2001 - 09/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
268	20011029	SAR036874	Letter Quarterly Report (07/2001 - 09/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB

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269	20011029	Report or Study	Quarterly Report (07/2001 - 09/2001)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
270	20011128	Letter	Reimbursement of Costs for Cleanup and Abatement Oversight	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
271	20011130	Letter	July - September 2001 Quarterly Monitoring Report and 10/2001 Monthly Monitoring Report; Order No. 97-36; NPDES Permit No. CAG039001; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
272	20011224	Letter	Assessment of Aquatic-Dependent Wildlife Risks at Shipyard Sediment Site	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
273	20011227	Memorandum to File	Transmittal of DTSC Comments on Work Plan to SWM	Alo, Tom	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
274	20020108	Letter	09/2001 Monthly Compliance Certification Report; Order No. 97-36; NPDES Permit No. CAG039001; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
275	20020124	Letter	NPDES Permit Renewal Order No. 97-36	Robertus, John	San Diego RWQCB G289	Halvax, Sandor	San Diego RWQCB
276	20020125	Video	06/2001 - 12/2001 Quarterly and Semi-Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
277	20020125	Video	06/2001 - 12/2001 Quarterly and Semi-Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
278	20020125	Video	06/2001 - 12/2001 Quarterly and Semi-Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
279	20020125	Video	06/2001 - 12/2001 Quarterly and Semi-Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
280	20020125	Video	06/2001 - 12/2001 Quarterly and Semi-Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB

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281	20020125	Video	06/2001 - 12/2001 Quarterly and Semi-Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
282	20020125	Video	06/2001 - 12/2001 Quarterly and Semi-Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
283	20020125	Video	06/2001 - 12/2001 Quarterly and Semi-Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
284	20020125	Letter	06/2001 - 12/2001 Quarterly and Semi-Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
285	20020125	Report or Study	06/2001 - 12/2001 Quarterly and Semi-Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
286	20020222	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
287	20020222	Letter	Reimbursement for Cleanup and Abatement Oversight	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
288	20020227	Report or Study	Compliance Certification Report, 01/2002	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
289	20020306	Letter	Background Reference Conditions for Assessment and Remediation of Shipyard Sediment Site	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
290	20020315	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
291	20020315	Letter	Request for Suspension of Sediment Monitoring Requirements of Order No. 97-36	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
292	20020328	Report or Study	Compliance Certification Report, 02/2002	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
293	20020411	Letter	Suspension of Sediment Monitoring Requirements for Order No. 97-36, for 07/01/2001 to 06/30/2002	Robertus, John	San Diego RWQCB	Halvax, Shaun	Southwest Marine, Inc.
294	20020422	Report or Study	Compliance Certification Report, 03/2002	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
295	20020426	Video	Quarterly Report (01/2002 - 03/2002)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB

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296	20020426	Video	Quarterly Report (01/2002 - 03/2002)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
297	20020426	Letter	Quarterly Report (01/2002 - 03/2002)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
298	20020426	Report or Study	Quarterly Report (01/2002 - 03/2002)	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
299	20020503	Report or Study	Compliance Certification Report, 04/2002	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
300	20020515	Letter	01/2002, 02/2002, 03/2002, 04/2002 Monthly, January - March 2002 Quarterly, and July - December 2001 Semiannual Reports; Order No. 97-36; NPDES Permit No. CAG039001; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
301	20020614	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
302	20020619	Report or Study	Compliance Certification Report, 05/2002	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
303	20020711	Report or Study	Inspection Report	Knedlik, Sabine; Richter, Paul J.	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
304	20020714	Report or Study	Compliance Certification Report, 06/2002	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
305	20020716	Letter	Assessment of Bioaccumulation and Risk to Fish	Robertus, John	San Diego RWQCB	Chee, Mike; Halvax, Sandor	NASSCO; Southwest Marine, Inc.
306	20020718	Video	01/2002 - 06/2002 Quarterly and Semi- Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
307	20020718	Video	01/2002 - 06/2002 Quarterly and Semi- Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
308	20020718	Letter	01/2002 - 06/2002 Quarterly and Semi- Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
309	20020718	Report or Study	01/2002 - 06/2002 Quarterly and Semi- Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB

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310	20020812	SAR037163	Letter	January - June 2002 Semi-Annual and April - June 2002 Quarterly Monitoring Reports; Order No. 97-36; NPDES Permit No. CAG039001; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
311	20020813	SAR037730	Report or Study	Compliance Certification Report, 07/2002	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
312	20020826	SAR037773	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
313	20020830	SAR037903	Letter	07/2001 - 06/2002 Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
314	20020830	SAR037904	Report or Study	07/2001 - 06/2002 Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
315	20020909	SAR037788	Letter	05/2002, 06/2002, and 07/2002 Monthly Compliance Certifications, 07/2001 - 06/2002 Annual Monitoring Report; Order No. 97-36; NPDES No. CAG039001; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
316	20020918	SAR037736	Report or Study	Compliance Certification Report, 08/2002	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
317	20020918	SAR068216	E-mail	Crab Analysis for Human Health Risk Assessment	Halvax, Shaun	Southwest Marine, Inc.	Alo, Tom San Diego RWQCB
318	20020921	SAR198672	Letter	401 Certification Application for Pier 1 Near Shore Replacement	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
319	20020926	SAR037789	Letter	08/2002 Monthly Compliance Certification; Order No. 97-36; NPDES No. CAG039001; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
320	20021003	SAR055850	Letter	Tentative Order No. R9-2002-0161	Robertus, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
321	20021003	SAR055853	Report or Study	Tentative Order No. R9-2002-0161	Robertus, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.

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322 20021008	SAR068064	Letter	PAH in Porewater	Halvax, Shaun	Southwest Marine, Inc.	Alo, Tom	San Diego RWQCB
323 20021008	SAR068065	E-mail	PAH in Porewater	Halvax, Shaun	Southwest Marine, Inc.	Alo, Tom	San Diego RWQCB
324 20021008	SAR068066	Letter	PAH in Porewater	Halvax, Shaun	Southwest Marine, Inc.	Alo, Tom	San Diego RWQCB
325 20021009	SAR198714	Letter	Essential Fish Habitat Assessment for Pier 1 Near Shore Replacement	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
326 20021009	SAR198715	Report or Study	Essential Fish Habitat Assessment for Pier 1 North Shore Replacement	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
327 20021015	SAR037738	Report or Study	Compliance Certification Report, 09/2002	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
328 20021017	SAR198732	Letter	Notification of Complete Application for Pier 1 Near Shore Replacement	Baczkowski, Stacey	San Diego RWQCB	Halvax, Shaun	Southwest Marine, Inc.
329 20021018	SAR068394	Letter	Analysis of PAH in Pore Water at NASSCO and SWM Shipyards	Robertus, John	San Diego RWQCB	Halvax, Shaun	Southwest Marine, Inc.
330 20021021	SAR037668	Letter	07/2002 - 09/2002 Quarterly Spill / Illicit Discharge Log, Quarterly Effluent Monitoring Report, Quarterly Drydock Submergence / Emergence Water	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
331 20021022	SAR037666	Letter	07/2002 - 09/2002 Quarterly Spill / Illicit Discharge Log, Quarterly Effluent Monitoring Report, Quarterly Drydock Submergence / Emergence Water	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
332 20021022	SAR037667	Other	07/2002 - 09/2002 Quarterly Spill / Illicit Discharge Log, Quarterly Effluent Monitoring Report, Quarterly Drydock Submergence / Emergence Water	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB

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333	20021022	SAR037669	Video 07/2002 - 09/2002 Quarterly Spill / Illicit Discharge Log, Quarterly Effluent Monitoring Report, Quarterly Drydock Submergence / Emergence Water	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
334	20021022	SAR037672	Video 07/2002 - 09/2002 Quarterly Spill / Illicit Discharge Log, Quarterly Effluent Monitoring Report, Quarterly Drydock Submergence / Emergence Water	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
335	20021022	SAR037673	Video 07/2002 - 09/2002 Quarterly Spill / Illicit Discharge Log, Quarterly Effluent Monitoring Report, Quarterly Drydock Submergence / Emergence Water	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
336	20021022	SAR037675	Video 07/2002 - 09/2002 Quarterly Spill / Illicit Discharge Log, Quarterly Effluent Monitoring Report, Quarterly Drydock Submergence / Emergence Water	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
337	20021022	SAR037676	Video 07/2002 - 09/2002 Quarterly Spill / Illicit Discharge Log, Quarterly Effluent Monitoring Report, Quarterly Drydock Submergence / Emergence Water	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
338	20021022	SAR037678	Video 07/2002 - 09/2002 Quarterly Spill / Illicit Discharge Log, Quarterly Effluent Monitoring Report, Quarterly Drydock Submergence / Emergence Water	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
339	20021022	SAR037781	Letter Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB

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340	20021025	SAR068219	E-mail	PAHs in Porewater and Sediment	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
341	20021025	SAR068220	Report or Study	PAHs in Porewater and Sediment	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
342	20021030	SAR056073	E-mail	Comments on Tentative Order No. R9- 2002-0161	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
343	20021030	SAR056074	Letter	Comments on Tentative Order No. R9- 2002-0161	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
344	20021030	SAR068222	E-mail	Additional Information on PAHs in Porewater and Sediment	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
345	20021031	SAR037787	Letter	09/2002 Monthly Compliance Certifications and 07/2002 - 09/2002 Quarterly Monitoring Report; Order No. 97-36; NPDES No. CAG039001; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
346	20021107	SAR056060	Letter	Response to Comments and Errata Sheet for Tentative Order No. R9-2002-0161	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
347	20021107	SAR056062	Memorand um to File	Response to Comments and Errata Sheet for Tentative Order No. R9-2002-0161	Knedlik, Sabine; Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
348	20021113	SAR055767	Report or Study	Adoption or Order No. R9-2002-0161	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
349	20021113	SAR056069	Report or Study	Response to Comments and Errata Sheet for Tentative Order No. R9-2002-0161	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
350	20021115	SAR055764	Letter	Adoption or Order No. R9-2002-0161	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
351	20021121	SAR037751	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB

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352 20021121	SAR037786	Letter	10/2002 Monthly Monitoring Report; Order No. R9-2002-0161; NPDES Permit No. CA010915J; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
353 20021122	SAR037752	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
354 20021125	SAR068104	E-mail	Proposed Approach to Evaluate Shipyard and Cholla/Paletta Reference Stations	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
355 20021125	SAR068105	Report or Study	Proposed Approach to Evaluate Shipyard and Cholla/Paletta Reference Stations	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
356 20021209	SAR198738	Letter	401 Certification for Pier 1 Near Shore Replacement	Robertus, John	San Diego RWQCB	Halvax, Shaun	Southwest Marine, Inc.
357 20021217	SAR037754	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
358 20021230	SAR037679	Letter	11/2002 Monthly Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
359 20021230	SAR037681	Report or Study	11/2002 Monthly Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
360 20030106	SAR067894	E-mail	Draft Agenda and Documents for 01/22/2003 - 01/23/2003 Technical Meeting	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; San Diego RWQCB; Southwest Marine, Inc.
361 20030106	SAR067896	Other	Draft Agenda and Documents for 01/22/2003 - 01/23/2003 Technical Meeting	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
362 20030106	SAR067898	Report or Study	Draft Agenda and Documents for 01/22/2003 - 01/23/2003 Technical Meeting	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
363 20030106	SAR067903	Report or Study	Draft Agenda and Documents for 01/22/2003 - 01/23/2003 Technical Meeting	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.

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364 20030106	SAR067909	Report or Study	Draft Agenda and Documents for 01/22/2003 - 01/23/2003 Technical Meeting	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
365 20030114	SAR067953	E-mail	Transmittal of Final Agenda for 01/22/2003 - 01/23/2003 Technical Meeting	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
366 20030114	SAR067954	Other	Transmittal of Final Agenda for 01/22/2003 - 01/23/2003 Technical Meeting	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
367 20030123	SAR037785	Letter	11/2002 Monthly Monitoring Report; Order No. R9-2002-0161; NPDES Permit No. CA0109151; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
368 20030127	SAR037742	Report or Study	Compliance Certification Report, 12/2002	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
369 20030131	SAR037646	Letter	10/2002 - 12/2002 Monthly / Quarterly / Semiannual Effluent Monitoring Report, Quarterly Spill / Illicit Discharge Log, Quarterly Drydock Submergence Records, Semi-Annual Waste Hauling Log	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
370 20030131	SAR037647	Report or Study	10/2002 - 12/2002 Monthly / Quarterly / Semiannual Effluent Monitoring Report, Quarterly Spill / Illicit Discharge Log, Quarterly Drydock Submergence Records, Semi-Annual Waste Hauling Log	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
371 20030131	SAR037648	Other	10/2002 - 12/2002 Monthly / Quarterly / Semiannual Effluent Monitoring Report, Quarterly Spill / Illicit Discharge Log, Quarterly Drydock Submergence Records, Semi-Annual Waste Hauling Log	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB

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371 20030131	SAR037649	Photograph	10/2002 - 12/2002 Monthly / Quarterly / Semiannual Effluent Monitoring Report, Quarterly Spill / Illicit Discharge Log, Quarterly Drydock Submergence Records, Semi-Annual Waste Hauling Log	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
372 20030131	SAR037654	Video	10/2002 - 12/2002 Monthly / Quarterly / Semiannual Effluent Monitoring Report, Quarterly Spill / Illicit Discharge Log, Quarterly Drydock Submergence Records, Semi-Annual Waste Hauling Log	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
373 20030131	SAR037656	Video	10/2002 - 12/2002 Monthly / Quarterly / Semiannual Effluent Monitoring Report, Quarterly Spill / Illicit Discharge Log, Quarterly Drydock Submergence Records, Semi-Annual Waste Hauling Log	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
374 20030131	SAR037657	Video	10/2002 - 12/2002 Monthly / Quarterly / Semiannual Effluent Monitoring Report, Quarterly Spill / Illicit Discharge Log, Quarterly Drydock Submergence Records, Semi-Annual Waste Hauling Log	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
375 20030131	SAR037660	Video	10/2002 - 12/2002 Monthly / Quarterly / Semiannual Effluent Monitoring Report, Quarterly Spill / Illicit Discharge Log, Quarterly Drydock Submergence Records, Semi-Annual Waste Hauling Log	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB

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376 20030131	SAR037661	Video	10/2002 - 12/2002 Monthly / Quarterly / Semiannual Effluent Monitoring Report, Quarterly Spill / Illicit Discharge Log, Quarterly Drydock Submergence Records, Semi-Annual Waste Hauling Log	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
377 20030131	SAR037663	Video	10/2002 - 12/2002 Monthly / Quarterly / Semiannual Effluent Monitoring Report, Quarterly Spill / Illicit Discharge Log, Quarterly Drydock Submergence Records, Semi-Annual Waste Hauling Log	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
378 20030131	SAR037664	Other	10/2002 - 12/2002 Monthly / Quarterly / Semiannual Effluent Monitoring Report, Quarterly Spill / Illicit Discharge Log, Quarterly Drydock Submergence Records, Semi-Annual Waste Hauling Log	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
379 20030206	SAR037784	Letter	12/2002 Monthly, 10/2002 - 12/2002 Quarterly, and 07/2002 - 12/2002 Semi-Annual Monitoring Report; Order No. R9-2002-0161; NPDES Permit No. CA0109151; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
380 20030210	SAR037790	Report or Study	Inspection Report	Amendola, Mark	EPA Region IX & State Water Resources Control Board	Halvax, Sandor	Southwest Marine, Inc.
381 20030213	SAR037760	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
382 20030218	SAR037743	Report or Study	Compliance Certification Report, 01/2003	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
383 20030225	SAR068404	Letter	SLIC Annual Estimation Letter for the Cost Recovery Program	Robertus, John	San Diego RWQCB	Halvax, Shaun	Southwest Marine, Inc.

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384 20030319	SAR037745	Report or Study	Compliance Certification Report, 02/2003	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
385 20030326	SAR068426	Letter	Request to Identify Other Dischargers Associated with Sediment Contamination	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
386 20030326	SAR068428	Other	Request to Identify Other Dischargers Associated with Sediment Contamination	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
387 20030327	SAR037783	Letter	02/2003 Monthly Monitoring Report; Order No. R9-2002-0161; NPDES Permit No. CA0109151; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
388 20030327	SAR058225	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
389 20030327	SAR066226	E-mail	Final Regional Board Position on Candidate Background Reference Stations	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
390 20030327	SAR066228	Report or Study	Final Regional Board Position on Candidate Background Reference Stations	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
391 20030327	SAR066235	Report or Study	Final Regional Board Position on Candidate Background Reference Stations		San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
392 20030327	SAR066243	Report or Study	Final Regional Board Position on Candidate Background Reference Stations	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
393 20030404	SAR058258	Report or Study	March 2003 Compliance Certification Report	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
394 20030408	SAR037902	Letter	Compliance Evaluation Inspection Report; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
395 20030411	SAR058224	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB

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396	20030416	SAR058220	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
397	20030417	SAR058219	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
398	20030422	SAR058222	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
399	20030425	SAR058223	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
400	20030429	SAR037542	01/2003 - 03/2003 Quarterly Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
401	20030429	SAR037543	01/2003 - 03/2003 Quarterly Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
402	20030429	SAR037643	01/2003 - 03/2003 Quarterly Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
403	20030429	SAR037645	01/2003 - 03/2003 Quarterly Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
404	20030430	SAR066966	Forward Elaine Carlin's Background Reference Pool Selection Document	Carlisle, Craig	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
406	20030430	SAR066967	Forward Elaine Carlin's Background Reference Pool Selection Document	Carlisle, Craig	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
407	20030430	SAR066968	Forward Elaine Carlin's Background Reference Pool Selection Document	Carlisle, Craig	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
408	20030430	SAR066977	Forward NOAA Comments on Proposed Background Reference Pool	Carlisle, Craig	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
409	20030430	SAR066978	Forward NOAA Comments on Proposed Background Reference Pool	Carlisle, Craig	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
410	20030509	SAR058218	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB

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411	20030512	SAR037747	Report or Study	Compliance Certification Report, 04/2003	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
412	20030514	SAR058217	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
416	20030515	SAR037782	Letter	03/2003 & 04/2003 Monthly and 01/2003 - 03/2003 Quarterly Monitoring Report; Order No. R9-2002-0161; NPDES Permit No. CA0109151; Facility: Southwest Marine, Inc.	Phillips, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
417	20030516	SAR058216	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
418	20030523	SAR198758	Report or Study	401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
419	20030523	SAR198774	Report or Study	401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
420	20030523	SAR198786	Other	401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
421	20030523	SAR198787	Letter	401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
422	20030523	SAR198789	Other	401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
423	20030523	SAR198796	Other	401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
434	20030523	SAR198797	Other	401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
425	20030523	SAR198802	Other	401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
426	20030523	SAR198803	Other	401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
427	20030523	SAR198819	Other	401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB

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428	20030523	SAR198820	Other	401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
429	20030523	SAR198824	Report or Study	401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
430	20030609	SAR058215	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
431	20030609	SAR068481	Letter	Regional Board Final Background Reference Pool Letter	Barker, David (DTB)	San Diego RWQCB	Bay, Steve; Chadwick, Bart; Chee, Mike; Halvax, Shaun NASSCO; Southern California Coastal Water Research Project; Southwest Marine, Inc.; US Navy
432	20030609	SAR068485	E-mail	Regional Board Final Background Reference Pool Letter	Barker, David (DTB)	San Diego RWQCB	Bay, Steve; Chadwick, Bart; Chee, Mike; Halvax, Shaun NASSCO; Southern California Coastal Water Research Project; Southwest Marine, Inc.; US Navy
433	20030612	SAR058214	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
434	20030616	SAR058274	Report or Study	May 2003 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
435	20030620	SAR058213	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
436	20030623	SAR058212	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB

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437	20030623	SAR068493	Letter	Comments on Final Background Reference Pool	Nielsen, Dreas	Exponent	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
438	20030623	SAR068498	E-mail	Regional Board Approach on Final Background Reference Pool	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
439	20030623	SAR068499	Report or Study	Regional Board Approach on Final Background Reference Pool	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
440	20030623	SAR068500	Report or Study	Regional Board Approach on Final Background Reference Pool	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
441	20030623	SAR068503	Report or Study	Regional Board Approach on Final Background Reference Pool	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
442	20030623	SAR068505	Report or Study	Regional Board Approach on Final Background Reference Pool	Alo, Tom	San Diego RWQCB	Chee, Mike; Halvax, Shaun	NASSCO; Southwest Marine, Inc.
443	20030626	SAR058245	Letter	Monthly and Quarterly Monitoring Reports, Order No. R9-2002-0161	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
444	20030702	SAR058211	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
445	20030703	SAR068415	Letter	SLIC Annual Estimation Letter for the Cost Recovery Program	Robertus, John	San Diego RWQCB	Halvax, Shaun	Southwest Marine, Inc.
446	20030703	SAR198845	Other	Incomplete Application Notice (Email) for 401 Certification Application for Bulkhead Extension	Hammer, Phil	San Diego RWQCB	Halvax, Shaun	Southwest Marine, Inc.
447	20030703	SAR198846	Report or Study	Incomplete Application Notice (Email) for 401 Certification Application for Bulkhead Extension	Hammer, Phil	San Diego RWQCB	Halvax, Shaun	Southwest Marine, Inc.
448	20030723	SAR058210	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB

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449 20030725	SAR058209	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
450 20030727	SAR058208	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
451 20030730	SAR038087	Letter	Quarterly Report, 04/2003 - 06/2003	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
452 20030730	SAR038088	Report or Study	Quarterly Report, 04/2003 - 06/2003	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
453 20030801	SAR058207	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
454 20030828	SAR058205	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
455 20030828	SAR058283	Report or Study	July 2003 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
456 20030829	SAR038215	Letter	2002 - 2003 Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
457 20030829	SAR038216	Report or Study	2002 - 2003 Annual Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John H.	San Diego RWQCB
458 20030902	SAR058204	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
459 20030903	SAR058203	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
460 20030905	SAR058200	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
461 20030908	SAR058199	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
462 20030918	SAR058242	Letter	Monthly and Quarterly Monitoring Reports, Order No. R9-2002-0161	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
463 20030922	SAR199855	E-mail	Eelgrass Mitigation Plan for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil	San Diego RWQCB
464 20030922	SAR199856	E-mail	Eelgrass Mitigation Plan for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil	San Diego RWQCB

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465	20030922	SAR199857	Report or Study	Eelgrass Mitigation Plan for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
466	20030924	SAR058297	Report or Study	August 2003 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
467	20031003	SAR193238	Other	Sale Agreement with San Diego Marine Construction	Halvax, Sandor	Southwest Marine, Inc.	Ott, Brennan San Diego RWQCB
468	20031003	SAR193239	Other	Sale Agreement with San Diego Marine Construction	Halvax, Sandor	Southwest Marine, Inc.	Ott, Brennan San Diego RWQCB
469	20031003	SAR193240	Other	Sale Agreement with San Diego Marine Construction	Halvax, Sandor	Southwest Marine, Inc.	Ott, Brennan San Diego RWQCB
470	20031013	SAR058198	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
471	20031014	SAR058197	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
472	20031016	SAR058196	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
473	20031031	SAR058934	Letter	3rd Quarter 2003 Effluent Monitoring Report, July - September 2003	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
474	20031031	SAR058935	Report or Study	3rd Quarter 2003 Effluent Monitoring Report, July - September 2003	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
475	20031031	SAR199844	Report or Study	Water Quality Monitoring Plan for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
476	20031112	SAR199980	Memorandum to File	CEQA Categorical Determination for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
477	20031113	SAR058240	Letter	Monthly and Quarterly Monitoring Reports, Order No. R9-2002-0161	Phillips, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
478	20031121	SAR058309	Report or Study	October 2003 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB

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479	20031126	SAR058195	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
480	20031203	SAR058194	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
481	20031204	SAR058193	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
482	20031204	SAR058244	Letter	Monthly and Quarterly Monitoring Reports, Order No. R9-2002-0161	Phillips, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
483	20031211	SAR058192	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
484	20031215	SAR056158	Letter	New Legislation Applies \$3,000 Mandatory Minimum Penalty for Late Monitoring Reports (Water Code Section 13385)	Robertus, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
485	20031217	SAR199982	Other	Final Mitigated Negative Declaration and Coastal Development Permit from Port District for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
486	20031218	SAR058191	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
487	20031230	SAR058323	Report or Study	November 2003 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
488	20040105	SAR199963	E-mail	Response to Technical Issues regarding Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil San Diego RWQCB
489	20040107	SAR104285	E-mail	Response Regarding Maintenance Dredging at SWM	Halvax, Sandor	Southwest Marine, Inc.	Alo, Tom San Diego RWQCB
490	20040108	SAR058238	Letter	Monthly and Quarterly Monitoring Reports, Order No. R9-2002-0161	Phillips, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
491	20040109	SAR058190	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
492	20040113	SAR058189	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB

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493 20040113	SAR104292	Letter	Regional Board Comments and Wuestions on Detailed Sediment Investigation Report	Carlisle, Craig	San Diego RWQCB	Chee, Mike; Halvax, Sandor	NASSCO; Southwest Marine, Inc.
494 20040114	SAR199972	Letter	Amended Project Description for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil	San Diego RWQCB
495 20040116	SAR058188	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
496 20040119	SAR058187	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
497 20040120	SAR058185	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
498 20040122	SAR058076	Letter	Compliance Evaluation Inspection Report, 12/11/2003 Inspection	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
499 20040122	SAR058078	Report or Study	Compliance Evaluation Inspection Report, 12/11/2003 Inspection	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
500 20040122	SAR058184	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
501 20040123	SAR199968	Letter	Changes to 401 Certification Application for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc.	Hammer, Phil	San Diego RWQCB
502 20040128	SAR059109	Video	4th Quarter and 2nd Semi-Annual 2003 Effluent Monitoring Report, July - December 2003	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
503 20040128	SAR059112	Video	4th Quarter and 2nd Semi-Annual 2003 Effluent Monitoring Report, July - December 2003	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
504 20040128	SAR059113	Letter	4th Quarter and 2nd Semi-Annual 2003 Effluent Monitoring Report, July - December 2003	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
505 20040128	SAR059114	Report or Study	4th Quarter and 2nd Semi-Annual 2003 Effluent Monitoring Report, July - December 2003	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB

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506	20040128	SAR056160	Letter	Approval of Enterolert for the Analysis of Ambient Receiving Water Samples	Robertus, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
507	20040128	SAR058183	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
508	20040129	SAR058182	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
509	20040202	SAR058181	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
510	20040209	SAR058180	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
511	20040210	SAR058179	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
512	20040211	SAR058178	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
513	20040220	SAR058177	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
514	20040223	SAR156670	Report or Study	Investigative Order Nos. R9-2004-0026 and R9-2004-0027: Submittal of Historical Site Assessment Reports	Carlisle, Craig	San Diego RWQCB	Chee, Mike; Halvax, Sandor NASSCO; Southwest Marine, Inc.
515	20040226	SAR058237	Letter	Monthly and Quarterly Monitoring Reports, Order No. R9-2002-0161	Phillips, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
516	20040301	SAR058333	Report or Study	January 2004 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
517	20040309	SAR058176	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
518	20040309	SAR058351	Report or Study	February 2004 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
519	20040317	SAR058226	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB

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520	20040318	SAR058227	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
521	20040322	SAR058236	Letter	Monthly and Quarterly Monitoring Reports, Order No. R9-2002-0161	Phillips, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
522	20040323	SAR058175	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
523	20040324	SAR058174	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
524	20040423	SAR058173	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
525	20040426	SAR058172	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
526	20040427	SAR058171	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
527	20040429	SAR058983	Letter	1st Quarter 2004 Effluent Monitoring Report, January - March 2004	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
528	20040429	SAR058984	Report or Study	1st Quarter 2004 Effluent Monitoring Report, January - March 2004	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
529	20040505	SAR058170	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
530	20040512	SAR058169	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
531	20040519	SAR058168	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
532	20040524	SAR058228	Other	Report of spill of grit to water on 05/21/2004	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
533	20040525	SAR058167	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
534	20040526	SAR058370	Report or Study	April 2004 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB

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535	20040526	SAR058166	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
536	20040601	SAR058165	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
537	20040607	SAR058164	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
538	20040617	SAR058163	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
539	20040622	SAR058161	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
540	20040624	SAR058162	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
541	20040624	SAR058392	Report or Study	May 2004 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
542	20040629	SAR058160	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
543	20040719	SAR058157	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
544	20040729	SAR059443	Letter	2nd Quarter & 1st Semi-Annual 2004 Effluent Monitoring Report, Jan - June 2004	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
545	20040729	SAR059444	Report or Study	2nd Quarter & 1st Semi-Annual 2004 Effluent Monitoring Report, Jan - June 2004	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
546	20040729	SAR058159	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
547	20040730	SAR058158	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
548	20040803	SAR058156	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
549	20040818	SAR058155	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB

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550 20040830	SAR058401	Report or Study	July 2004 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
551 20040830	SAR104110	Other	SLIC Annual Estimation Letter for Cost Recovery Program	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
552 20040830	SAR104117	Other	SLIC Annual Estimation Letter for Cost Recovery Program	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
553 20040830	SAR104118	Reference	SLIC Annual Estimation letter for Cost Recovery Program	Robertus, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
554 20040830	SAR104119	Other	Workshop Agenda: Regionalization of the Documents and Errata	Robertus, John	San Diego RWQCB	Halvax, Sandor	San Diego RWQCB
555 20040901	SAR058781	Video	3rd Quarter 2004 Effluent Monitoring Report, July - September 2004	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
556 20040901	SAR058784	Video	3rd Quarter 2004 Effluent Monitoring Report, July - September 2004	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
557 20040901	SAR058786	Report or Study	3rd Quarter 2004 Effluent Monitoring Report, July - September 2004	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
558 20040901	SAR058530	Letter	Annual Effluent Monitoring Report, June 2003 - June 2004	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
559 20040901	SAR058531	Report or Study	Annual Effluent Monitoring Report, June 2003 - June 2004	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
560 20040903	SAR058154	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
561 20040907	SAR058234	Letter	Monthly and Quarterly Monitoring Reports, Order No. R9-2002-0161	Phillips, John	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
562 20040908	SAR058202	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
563 20040909	SAR058101	Letter	NOV No. R9-2005-0375; April - June Quarterly Monitoring Report, Order No. R9-2002-0161	McCann, Michael (Mike)	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.

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564	20040909	SAR058109	Other	NOV No. R9-2005-0375; April - June Quarterly Monitoring Report, Order No. R9-2002-0161	McCann, Michael (Mike)	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
565	20040909	SAR058111	Letter	NOV No. R9-2005-0375; January - March Quarterly Monitoring Report, Order No. R9-2002-0161	McCann, Michael (Mike)	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
566	20040909	SAR058119	Other	NOV No. R9-2005-0375; January - March Quarterly Monitoring Report, Order No. R9-2002-0161	McCann, Michael (Mike)	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
567	20040910	SAR058152	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
568	20040910	SAR058153	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
569	20040913	SAR058150	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
570	20040913	SAR058151	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
571	20040928	SAR058426	Report or Study	August 2004 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
572	20040928	SAR058149	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
573	20041003	SAR193216	Letter	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
574	20041003	SAR193217	Letter	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
575	20041003	SAR193218	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB

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576	20041003	SAR193219	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
577	20041003	SAR193221	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
578	20041003	SAR193222	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
579	20041003	SAR193223	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
580	20041003	SAR193224	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
581	20041003	SAR193225	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
582	20041003	SAR193226	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
583	20041003	SAR193227	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
584	20041003	SAR193228	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
585	20041003	SAR193231	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB
586	20041003	SAR193232	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John San Diego RWQCB

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587 20041003	SAR193233	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
588 20041003	SAR193234	Other	SWM Comments on MARCO Response to Investigative Order No. R9-2004-0026	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
589 20041004	SAR058148	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
590 20041014	SAR058147	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
591 20041025	SAR058785	Letter	3rd Quarter 2004 Effluent Monitoring Report, July - September 2004	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
592 20041028	SAR058455	Report or Study	September 2004 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
593 20041101	SAR058146	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
594 20041104	SAR058145	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
595 20041110	SAR058144	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
596 20041115	SAR058143	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
597 20041115	SAR058500	Report or Study	October 2004 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
598 20041117	SAR058142	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
599 20041122	SAR058141	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
600 20041201	SAR058139	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB

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601 20041201	SAR058140	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
602 20041202	SAR058138	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
603 20041202	SAR056153	Letter	Presentation of Calif. Integrated Water Quality Systems (CIWQS) - 12/16/2004 at San Diego Regional Board Office	McCann, Michael (Mike)	San Diego RWQCB	Halvax, Sandor	Southwest Marine, Inc.
604 20041203	SAR058137	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
605 20041206	SAR058136	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
606 20041208	SAR058527	Report or Study	November 2004 Monthly Effluent Monitoring Reports and Compliance Certification	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
607 20041210	SAR058135	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
608 20041214	SAR058134	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
609 20041222	SAR058133	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
610 20041229	SAR058132	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
611 20050125	SAR059268	Video	4th Quarter and 2nd Semi-Annual 2004 Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
612 20050125	SAR059271	Video	4th Quarter and 2nd Semi-Annual 2004 Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
613 20050125	SAR059272	Letter	4th Quarter and 2nd Semi-Annual 2004 Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
614 20050125	SAR059273	Report or Study	4th Quarter and 2nd Semi-Annual 2004 Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
615 20050128	SAR058131	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB

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616	20050203	SAR058130	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
617	20050217	SAR058129	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
618	20050218	SAR058260	Report or Study	January 2005 Compliance Certification Report	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
619	20050223	SAR058128	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
620	20050224	SAR058127	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
621	20050301	SAR058126	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
622	20050309	SAR058125	Other	Docking and Undocking Operations	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
623	20050311	SAR056199	Report or Study	Spill Report	Halvax, Sandor; Miranda, Sophia	Southwest Marine, Inc.	Kelley, Brian (BDK) San Diego RWQCB
624	20050311	SAR058124	Other	Docking and Undocking Operations	Glen, Julia; Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB
625	20050316	SAR056197	Report or Study	Spill Report	Halvax, Sandor	Southwest Marine, Inc.	Kelley, Brian (BDK) San Diego RWQCB
626	20050317	SAR058232	Letter	Monthly and Quarterly Monitoring Reports, Order No. R9-2002-0161	Phillips, John	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
627	20050321	SAR058121	Letter	NOV No. R9-2005-0069; 2004 Annual Monitoring Report, Order No. R9-2002-0161	McCann, Michael (Mike)	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
628	20050321	SAR058246	Letter	Receipt of 2004 Annual Monitoring Report; NOV No. R9-2005-0069 Attached	McCann, Michael (Mike)	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
629	20050321	SAR058254	Other	Receipt of 2004 Annual Monitoring Report; NOV No. R9-2005-0069 Attached	McCann, Michael (Mike)	San Diego RWQCB	Halvax, Sandor Southwest Marine, Inc.
630	20050322	SAR056195	Report or Study	Spill Report	Halvax, Sandor; Miranda, Sophia	Southwest Marine, Inc.	Richter, Paul J. San Diego RWQCB

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634 20050323	SAR058264	Report or Study	February 2005 Compliance Certification Report	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
631 20050427	SAR156358	E-mail	Notice of Public Workshop and Notice of Public Hearing for Tentative CAO No. R9-2005-0126	Monji, Alan	San Diego RWQCB	Carlin, Elaine; Chee, Mike; Gonzalez, Marco; Gordon, Brian; Halvax, Sandor; Merk, David	Environmental Health Coalition; NASSCO; San Diego Unified Port District; San Diego Bay Council; Southwest Marine, Inc.; US Navy
632 20050427	SAR156359	Report or Study	Notice of Public Workshop and Notice of Public Hearing for Tentative CAO No. R9-2005-0126	Monji, Alan	San Diego RWQCB	Carlin, Elaine; Chee, Mike; Gonzalez, Marco; Gordon, Brian; Halvax, Sandor; Merk, David	Environmental Health Coalition; NASSCO; San Diego Unified Port District; San Diego Bay Council; Southwest Marine, Inc.; US Navy
633 20050429	SAR058905	Video	First Quarter 2005 Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
634 20050429	SAR058908	Video	First Quarter 2005 Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
635 20050429	SAR058909	Letter	First Quarter 2005 Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB
636 20050429	SAR058910	Report or Study	First Quarter 2005 Effluent Monitoring Report	Halvax, Sandor	Southwest Marine, Inc.	Robertus, John	San Diego RWQCB

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637	20050429	SAR156282	E-mail	Tentative CAO No. R9-2005-0126, E-mail Transmittal	Monji, Alan	San Diego RWQCB	Chee, Mike; Fernstrom, H. Allen; Gonzales, Anthony; Halvax, Sandor; Henry, Karen; McVey, Lane; Rowland, Ken; Thun, Roy; Wilkenfeld, Robert	BP / Atlantic Richfield Company; Chevron; Marine Construction and Design Company; NASSCO; City of San Diego; San Diego Gas and Electric; Sempra Energy; Southwest Marine, Inc.; US Navy
638	20050429	SAR156283	Letter	Tentative CAO No. R9-2005-0126, E-mail Transmittal	Monji, Alan	San Diego RWQCB	Chee, Mike; Fernstrom, H. Allen; Gonzales, Anthony; Halvax, Sandor; Henry, Karen; McVey, Lane; Rowland, Ken; Thun, Roy; Wilkenfeld, Robert	BP / Atlantic Richfield Company; Chevron; Marine Construction and Design Company; NASSCO; City of San Diego; San Diego Gas and Electric; Sempra Energy; Southwest Marine, Inc.; US Navy

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639 20050429	SAR156285	Report or Study	Tentative CAO No. R9-2005-0126, E-mail Transmittal	Monji, Alan	San Diego RWQCB	Chee, Mike; Fernstrom, H. Allen; Gonzales, Anthony; Halvax, Sandor; Henry, Karen; McVey, Lane; Rowland, Ken; Thun, Roy; Wilkenfeld, Robert	BP / Atlantic Richfield Company; Chevron; Marine Construction and Design Company; NASSCO; City of San Diego; San Diego Gas and Electric; Sempra Energy; Southwest Marine, Inc.; US Navy
640 20050429	SAR156319	Report or Study	Tentative CAO No. R9-2005-0126, E-mail Transmittal	Monji, Alan	San Diego RWQCB	Chee, Mike; Fernstrom, H. Allen; Gonzales, Anthony; Halvax, Sandor; Henry, Karen; McVey, Lane; Rowland, Ken; Thun, Roy; Wilkenfeld, Robert	BP / Atlantic Richfield Company; Chevron; Marine Construction and Design Company; NASSCO; City of San Diego; San Diego Gas and Electric; Sempra Energy; Southwest Marine, Inc.; US Navy

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641 20050429	SAR156320	Letter	Transmittal Letter for Tentative CAO No. R9-2005-0126	Robertus, John	San Diego RWQCB	Chee, Mike; Fernstrom, H. Allen; Gonzales, Anthony; Halvax, Sandor; Henry, Karen; McVey, Lane; Rowland, Ken; Thun, Roy; Wilkenfeld, Robert	BP / Atlantic Richfield Company; Chevron Environmental Management Company; Marine Construction and Design Company; NASSCO; City of San Diego; San Diego Gas and Electric; Sempra Energy; Southwest Marine, Inc.; US Navy

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642	20050429	SAR156322	Report or Study	Robertus, John	San Diego RWQCB	Chee, Mike; Fernstrom, H. Allen; Gonzales, Anthony; Halvax, Sandor; Henry, Karen; McVey, Lane; Rowland, Ken; Thun, Roy; Wilkenfeld, Robert	BP / Atlantic Richfield Company; Chevron Environmental Management Company; Marine Construction and Design Company; NASSCO; City of San Diego; San Diego Gas and Electric; Sempra Energy; Southwest Marine, Inc.; US Navy

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643	20050429	SAR156356	Report or Study	Transmittal Letter for Tentative CAO No. R9-2005-0126	Robertus, John	San Diego RWQCB	BP / Atlantic Richfield Company; Chevron Environmental Management Company; Marine Construction and Design Company; NASSCO; City of San Diego; San Diego Gas and Electric; Sempra Energy; Southwest Marine, Inc.; US Navy
644	20050520	SAR156368	E-mail	Notice of Public Workshop Reschedule and Postponement of Public Hearing for Tentative CAO No. R9-2005-0126	Carlisle, Craig	San Diego RWQCB	Environmental Health Coalition; NASSCO; San Diego Unified Port District; San Diego Bay Council; Southwest Marine, Inc.; US Navy

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645	20050520	SAR156369	Report or Study	Notice of Public Workshop Reschedule and Postponement of Public Hearing for Tentative CAO No. R9-2005-0126	Carlisle, Craig	San Diego RWQCB	Environmental Health Coalition; NASSCO; San Diego Unified Port District; San Diego Bay Council; Southwest Marine, Inc.; US Navy
646	20050530	SAR058266	Report or Study	April 2005 Compliance Certification Report	Halvax, Sandor	Southwest Marine, Inc.	San Diego RWQCB
647	20050530	SAR058269	Report or Study	April 2005 Compliance Certification Report	Halvax, Sandor	Southwest Marine, Inc.	San Diego RWQCB
648	20050606	SAR058267	Report or Study	May 2005 Compliance Certification Report	Halvax, Sandor	Southwest Marine, Inc.	San Diego RWQCB
649	20050606	SAR058271	Report or Study	May 2005 Compliance Certification Report	Halvax, Sandor	Southwest Marine, Inc.	San Diego RWQCB

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650 20050624	SAR195991	E-mail	Transmittal of June 29, 2005 Workshop Agenda	Alo, Tom	San Diego RWQCB	Chee, Mike; Fernstrom, H. Allen; Gonzales, Anthony; Gonzalez, Marco; Gonzales, Vincent; Gordon, Brian; Halvax, Shaun; Hunter, Laura; McVey, Lane; Reznik, Bruce; Rowland, Ken; Thun, Roy; Tulloch, Scott; Wall, Brian	BP / Atlantic Richfield Company; Chevron Texaco; Environmental Health Coalition; MARCO; NASSCO; San Diego Baykeeper; City of San Diego; San Diego Bay Council; Sempra Energy; Southwest Marine, Inc.; US Navy

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TAB DATE	BATES NO.	DOC_TYPE	SUBJECT	FROM	FM_ORG	TO	TO_ORG
651 20050624	SAR195992	Memorandum to File	transmittal of June 29, 2005 Workshop Agenda	Alo, Tom	San Diego RWQCB	Chee, Mike; Fernstrom, H. Allen; Gonzales, Anthony; Gonzalez, Marco; Gonzales, Vincent; Gordon, Brian; Halvax, Shaun; Hunter, Laura; McVey, Lane; Reznik, Bruce; Rowland, Ken; Thun, Roy; Tulloch, Scott; Wall, Brian	BP / Atlantic Richfield Company; Chevron Texaco; Environmental Health Coalition; MARCO; NASSCO; San Diego Baykeeper; City of San Diego; San Diego Bay Council; Sempra Energy; Southwest Marine, Inc.; US Navy
652 20050711	SAR058272	Report or Study	June 2005 Compliance Certification Report	Halvax, Sandor	Southwest Marine, Inc.	Richter, Paul J.	San Diego RWQCB
653 20050712	SAR197014	Letter	Notification of Company Name Change	Halvax, Sandor	BAE Systems	Robertus, John H.	San Diego RWQCB
654 20050815	SAR197002	Letter	SLIC Annual Estimation Letter for Cost Recovery Program	Robertus, John H.	San Diego RWQCB	Halvax, Sandor	BAE Systems

**RECORD OF WRITTEN COMMUNICATIONS BETWEEN SWM AND RWCB DURING DEVELOPMENT OF THE DTR
CHRONOLOGICAL INDEX**

TAB DATE	BATES NO.	DOC TYPE	SUBJECT	FROM	FM_ORG	TO	TO_ORG
655 20050830	SAR196008	Other	Notice of Pre-Hearing Conference for Tentative CAO No. R9-2005-0126	Melbourn, Frank	San Diego RWQCB	Chee, T. Michael; Fernstrom, H. Allen; Gonzales, Vincent; Gordon, Brian; Halvax, Sandor; Hunter, Laura; Mark, David; McNevin, Christopher; Thun, Roy; Tulloch, Scott	ARCO; Chevron; MARCO; NASSCO; Pilsbury, Winthrop, Shaw, Pittman LLP; Port of San Diego; City of San Diego; San Diego Bay Council; San Diego Gas & Electric (SDG&E); Sempra Energy; Southwest Marine, Inc.; US Navy
656 20050830	SAR196015	E-mail	Notice of Pre-Hearing Conference for Tentative CAO No. R9-2005-0126	Melbourn, Frank	San Diego RWQCB	Chee, T. Michael; Fernstrom, H. Allen; Gonzales, Vincent; Gordon, Brian; Halvax, Sandor; Hunter, Laura; Mark, David; McNevin, Christopher; Thun, Roy; Tulloch, Scott	ARCO; Chevron; MARCO; NASSCO; Pilsbury, Winthrop, Shaw, Pittman LLP; Port of San Diego; City of San Diego; San Diego Bay Council; San Diego Gas & Electric (SDG&E); Sempra Energy; Southwest Marine, Inc.; US Navy

**RECORD OF WRITTEN COMMUNICATIONS BETWEEN SWM AND RWCB DURING DEVELOPMENT OF THE DTR
CHRONOLOGICAL INDEX**

TAB DATE	BATES NO.	DOC_TYPE	SUBJECT	FROM	FM_ORG	TO	TO_ORG
657 20050830	SAR196016	Other	Notice of Pre-Hearing Conference for Tentative No. CAO No. R9-2005-0126	Melbourn, Frank	San Diego RWQCB	Chee, T. Michael; Fernstrom, H. Allen; Gonzales, Vincent; Gordon, Brian; Halvax, Sandor; Hunter, Laura; Mark, David; McNevin, Christopher; Thun, Roy; Tulloch, Scott	ARCO; Chevron; MARCO; NASSCO; Pilsbury, Winthrop, Shaw, Pittman LLP; Port of San Diego; City of San Diego; San Diego Bay Council; San Diego Gas & Electric (SDG&E); Sempra Energy; Southwest Marine, Inc.; US Navy
658 20050901	SAR196017	Other	Supplemental Notice of Pre-Hearing Conference for Tentative CAO NO. R9-2005-0126	Melbourn, Frank	San Diego RWQCB	Chee, T. Michael; Fernstrom, H. Allen; Gonzales, Vincent; Gordon, Brian; Halvax, Sandor; Hunter, Laura; Mark, David; McNevin, Christopher; Thun, Roy; Tulloch, Scott	ARCO; Chevron; MARCO; NASSCO; Pilsbury, Winthrop, Shaw, Pittman LLP; Port of San Diego; City of San Diego; San Diego Bay Council; San Diego Gas & Electric (SDG&E); Sempra Energy; Southwest Marine, Inc.; US Navy

**RECORD OF WRITTEN COMMUNICATIONS BETWEEN SWM AND RWCB DURING DEVELOPMENT OF THE DTR
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TAB DATE	BATES NO.	DOC_TYPE	SUBJECT	FROM	FM_ORG	TO	TO_ORG
659	20060313	SAR199906	Letter	Notification of Start Date for Bulkhead Extension	Halvax, Sandor	Southwest Marine, Inc. H.	Robertus, John San Diego RWQCB
660	20060807	SAR198275	Letter	Annual SLIC Estimation for Cost Recovery Program	Tobler, Ben	San Diego RWQCB	Halvax, Sandor BAE Systems

From: Craig Carlisle
To: Alo, Tom; Barker, David
Date: 7/25/03 1:09PM
Subject: Notes from Telephone call from Shaun Halvax, SW Marine

Shaun called today and here are some notes.

1. He asked if we received comments from other stakeholders regarding our final reference pool. He would like copies of any comments.
2. He asked about providing input for the CAO, so it would have schedules and technical requirements they could live with. At what point will the SYs be able to be involved in developing the CAO? **[I said that we will know more about that after receiving their report. They will be involved at least to the extent that we utilize information in their report to draft our staff report and the CAO.]**
3. He was concerned about the perception associated with issuing a CAO. A CAO can be very benign or it can look like the SYs were forced to do this work. Is there another mechanism we could use, or a way to word the CAO, to indicate that the SYs have been very cooperative?
4. How are we going to deal with the other potential responsible parties (previous tenants, historical SDG&E discharges, etc.)? He cited the package of materials sent on historical activities. **[I said we have been looking at that and suggested that he consider sending a letter specifically citing other dischargers and include their current name and address. I also suggested that we could meet to discuss this issue.]**

Craig L. Carlisle
Senior Engineering Geologist
RWQCB
858.637-7119
craigc@rb9.swrcb.ca.gov

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at <http://www.swrcb.ca.gov>

CC: Halvax, Shaun; Monji, Alan; Ott, Brennan

jimsteno.com	EXHIBIT NO. _____
	1241
	<i>Barber</i>



NATIONAL STEEL AND SHIPBUILDING COMPANY
A GENERAL DYNAMICS COMPANY

LANE L. McVEY
VICE PRESIDENT, BUSINESS AFFAIRS AND LAW

November 9, 2004

Mr. David Barker
Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Re: Shipyard Sediment Investigation

Dear Mr. Barker:

National Steel and Shipbuilding Company ("NASSCO") has reviewed the technical reports submitted by the various parties in response to the requests by the Regional Water Quality Control Board ("Water Board") under Water Code Section 13267 to evaluate potential sources of contamination in the area of the NASSCO leasehold. The reports confirm that those parties contributed to, or are otherwise responsible for, contamination in the sediment at NASSCO. Consistent with my letter to you of December 23, 2003, NASSCO respectfully requests that the Water Board add those parties to any Cleanup and Abatement Order that may be issued to address sediment conditions at NASSCO's leasehold.

The reports submitted by the San Diego Unified Port District ("Port") and City of San Diego ("City") further support the conclusion in the *Detailed Sediment Investigation Report*, prepared by Exponent in September 2003 ("Exponent Report"), that until contaminants in municipal storm water discharged in the vicinity of the NASSCO site are controlled, it is technically infeasible to remediate sediments to background conditions. The reports make clear that the Water Board must adopt a comprehensive approach to addressing the contamination in the area of the shipyard leaseholds that will take into account the continuing, uncontrolled sources of contamination unrelated to NASSCO's operations.

A. **POTENTIALLY RESPONSIBLE PARTIES**

1. United States Navy

On July 15, 2004, the United States Navy ("Navy") submitted a report titled *Historical Navy Activities at National Steel and Shipbuilding Company Shipyard* ("Navy Report"). The Navy Report describes government operations and potential sources of contaminants at and near the NASSCO leasehold, including: PAH from timbers of piers and boatways; metals from wastes from the battery shop, machine shop, pipe shop, and paint used in maintenance activities; and oils and PCBs from hydraulic

NASSCO
03-0006.05 My
(ENFORCEMENT)

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jmsieno.com	EXHIBIT NO. _____
	1242
	Barker

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fluid leaks from overhead cranes, machinery in shops, and electrical equipment in the electric shop.

The Navy argues, without technical justification, that most of its discharges from these sources into San Diego Bay would have been dredged when the NASSCO drydock was constructed. Exponent has reviewed the Navy Report and the history of NASSCO's dredging operations and concluded that the Navy's position is not supported. See Letter from D. Nielsen to L. McVey, dated September 29, 2004 (Attachment "A"). Even more importantly, in its report, the Navy completely fails to address the principal findings of the Board, at paragraph 9 of its letter to the Navy, that the Navy owned a floating drydock at the site and has used dockside space and Navy personnel for painting and scraping of ships.

As observed by NASSCO employees and by employees of former occupants of the NASSCO site, it has been the routine practice of the Navy to conduct dockside paint removal activities from the upper works of its ships using its own personnel while those ships are docked at NASSCO's facility. While it is possible that detailed records of activities conducted by ships docked at the NASSCO shipyard are not maintained by the Navy, there undoubtedly are substantial records or procedures that specifically describe the activities of sailors, relating to painting, blasting, and waste management, while ships are docked at the shipyard for repair and maintenance. Moreover, to the extent that contamination in the sediment is caused by ship-related activities, the Navy is responsible because a majority of the ships (and hence, a majority of the wastes generated from those ships) are owned by the Navy.

The Navy's response also completely fails to address its ownership of a floating dry dock at the site from the 1950s through the 1970s. Former and current NASSCO employees recall that beginning in at least the 1950s, the Navy leased a dry dock designated as Navy Auxiliary Floating Dry Dock, AFDL -37, measuring 350 feet in length and approximately 90 feet in width, initially to the Martinolich Shipbuilding Company and subsequently to National Steel and Shipbuilding Corporation and NASSCO. According to the employees, the dry dock was returned to the Navy in 1982 or 1983 and is currently believed to be in Suisen Bay being mothballed. NASSCO is searching its own records to locate further evidence of the Navy's ownership of AFDL-37 and respectfully requests that the Board seek additional records of its ownership and operation from the Navy.

Finally, as a result of the technical report submitted by the Port District, NASSCO learned of a further basis for naming the Navy as a responsible party: the Navy is responsible for contaminated sediment that was relocated from its property to NASSCO. In its report, dated June 30, 2004, titled *Historical Study San Diego Bay*

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Waterfront Sampson Street to 28th Street ("Port District Report"), the Port described sources of pollutants from the Navy, including contaminated sediments dredged from Navy property and used as fill at the NASSCO leasehold. In 1935, the Navy dredged an area of its site referred to as "red lead alley" (so-named because the Navy removed rust and orange-red paint undercoat from destroyers in this area of its base). The contaminated sediments were dredged and used for fill in other parts of the bay to reclaim tidelands. In the same year that the massive Navy dredging project occurred (1935), the adjacent area between Sampson and 28th Streets was filled, creating the property comprising the NASSCO leasehold. Hence, from its creation, the NASSCO site has contained contaminants from Navy operations. See Port District Report at 47. As shown in old aerial photographs (see, e.g., Figures 1-4 of the Navy Report), much of the fill area comprising the current NASSCO leasehold was not covered with concrete or asphalt, such that contaminants from fill could potentially migrate into the sediment with surface runoff.

Accordingly, for all of these reasons, it is clear that the Navy contributed pollutants to the sediment at NASSCO. The Navy, therefore, should bear responsibility for cleanup costs required at the site and should be added as a party to any Cleanup and Abatement Order issued by the Water Board.

2. City of San Diego

On July 15, 2004, the City submitted a technical report titled *Report for the Investigation of Exceedances of the Sediment Quality Objectives at National Steel and Shipbuilding Company Shipyard* ("City Report"). In its report, the City confirms that it owned the property of the NASSCO leasehold during a period when contaminants likely were discharged to the sediment. See City Report at 3; see also Port District Report at 26-70.

In addition, the City Report identifies various sources of pollutants that the City discharged (and continues to discharge) into the area of the NASSCO leasehold, the most significant of which is the discharge of contaminated municipal storm water from Chollas Creek, immediately adjacent to NASSCO. See City Report at 5-8; see also Port District Report at 32-35. Historic sources of contamination in the Chollas Creek watershed include industrial facilities, burning of ash and debris, and a wrecked automobile disposal site, as well as urban runoff generally. Id. Current sources include those documented in the administrative proceedings associated with the MS4 permit recently issued by the Water Board to the San Diego co-permittees. All metals found in NASSCO sediment have been observed at elevated levels in storm water samples collected from Chollas Creek. Id. Further, contamination originating from Chollas Creek has been shown to extend into NASSCO's leasehold. See Attachment "B"

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(*Stormwater Toxicity in Chollas Creek and San Diego Bay, California*, K. Schiff, S. Bay, and D. Diehl, Southern California Coastal Water Research Project Authority, Annual Report, pp. 224-33 (2002)).

Remarkably, without presenting data or analyses to support its position, the City argues that the contamination gradient emanating from Chollas Creek suggests that contaminated municipal storm water may not be a source of pollutants in the sediment at NASSCO. However, Exponent's letter explains that "[the City's] conclusion is not consistent with the identification of Chollas Creek as a hot spot that has higher concentrations than adjacent areas of the bay." See Attachment "A" at 2. Moreover, figures in the Navy poster, on which the City relies, "clearly show evidence of a spatial gradient – a plume – of contaminant concentrations and TSS off of Chollas Creek." *Id.* Exponent critiques the City's bases for its assertions and concludes that there is "strong evidence that Chollas Creek outflow will contribute sediment contamination to both NASSCO and Southwest Marine leaseholds." *Id.*

The City Report describes a provision in the City's leases with two of its many tenants, that apparently requires lessees to arrange for the drainage of storm water from the leaseholds into the bay as required by the City. Another lease provision mandates tenants' compliance with applicable laws. Conditions were later added to the City's leases that required tenants to maintain insurance and to indemnify the City. However, none of the provisions cited by the City address waste materials, pollutants, sediment, sediment contamination, etc., nor do they purport to limit the City's liability vis-à-vis the State or other responsible parties in any cleanup action.

Therefore, as a discharger of contaminants into the leasehold, and as an owner of the site at a time when others discharged pollutants, the City bears responsibility for contamination in the sediment at NASSCO, and should be added as a party to any Cleanup and Abatement Order issued by the Water Board.

3. Chevron

Chevron, successor to Standard Oil Company, submitted a technical report to the Water Board titled *Technical Data Report, Chevron San Diego Terminal*, dated July 13, 2004 ("Chevron Report"). The Chevron Report, as well as the Port District Report, show that significant releases of lead and hydrocarbons, including BTEX and PAHs, were released in the area of the NASSCO leasehold.

In 1913, a major fire erupted at the Chevron tank farm where two million gallons of leaded gasoline, black oil, and distillate oil reportedly were lost. See Chevron Report at 21; see also Port District Report at 41-42. Local newspaper articles and

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photographs demonstrate that burning hydrocarbons spread across the bay and ignited other structures.¹ See Port District Report at Appendices D, G. In light of the fire, hydrocarbon contamination reaching the bay sediments would be both pyrogenic and petrogenic in nature (which is consistent with the types of hydrocarbons observed at NASSCO), and the 250,000 gallons of leaded gasoline lost during the fire may have resulted in lead reaching the sediment.

In addition to the catastrophic release in 1913, Chevron has had other reported releases of hydrocarbons from its facilities, ranging from minor spills to releases of thousands of gallons of oil, that may have impacted the bay. See Chevron Report at 21; see also Port District Report at 42-43.

For these reasons, Chevron bears responsibility for the contaminants that it discharged into the sediment at the NASSCO leasehold and should be added as a party to any Cleanup and Abatement Order issued by the Water Board.

4. Port District

The Port District Report confirms that numerous former tenants discharged a wide array of contaminants of concern into the water and sediment at NASSCO's leasehold,² including during the period of Port ownership of the property. See Port District Report at 28, 35-79. As the current owner of the site, and as successor to the City of San Diego, the Port is responsible for contamination that it (and current and past tenants) caused.

The technical reports submitted by the responsible parties, as well as the Exponent Report, confirm that shipbuilding is not a likely source of several contaminants of concern observed at the site, including hydrocarbons, PCBs, and pesticides. The reports further demonstrate that other Port tenants caused at least a substantial portion of

¹ The Chevron Report disputes that hydrocarbons reached the bay during the fire, despite the overwhelming evidence to the contrary. Photographs and contemporaneous newspaper articles documented the release to the bay, and it is rather telling that when the tank farm was rebuilt, it was enclosed by a low containment wall (the prior tank farm apparently had no such wall) to contain future catastrophic releases.

² The description of the corporate history of NASSCO in the Port District Report may be misleading. NASSCO was formed in 1960 and is a separate and distinct legal entity from prior shipbuilding companies operating in San Diego Bay, including the similarly-named National Steel and Shipbuilding Corporation.

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the sediment contamination at NASSCO. The Port, therefore, is responsible for a portion of any costs incurred in connection with the investigation or remediation of sediment at the NASSCO site and should be added as a party to any Cleanup and Abatement Order issued by the Water Board.

5. Other Responsible Parties

The Port District Report identifies a number of other parties that may be responsible for contamination in the sediment at NASSCO. They include ETS-Hoskins, Savage Tire, ARCO, Aztec Brewery, Harbor Boat Works, Martinolich Shipbuilding Company, Robbins Marine Engine Works, Lynch Shipbuilding, Warren Boat Company, U.S. Steel Shipbuilding Company, and several canning companies. Each of these facilities had releases, or the nature of their operations suggest that they may have had releases, which impacted the sediment at NASSCO. For example, the Port has documentation showing that Martinolich dumped spent sandblast sand into the bay at the area of the current NASSCO leasehold. An ARCO pipeline leaked hydrocarbons at the NASSCO site, and ETS-Hoskins operated an electric shop that may have handled PCB wastes in the area.

In light of the Port's analysis, the Water Board has sufficient information to name these parties in any Cleanup and Abatement Order that may be issued. At a minimum, NASSCO urges the Water Board to undertake further investigation into these potentially responsible parties.

6. Conclusion

The technical reports provide substantial evidence of the responsibility of the parties named above for sediment contamination at NASSCO, and provide clear justification for naming them in any orders that may be issued by the Water Board related to the sediment at NASSCO. See, e.g., Water Quality Enforcement Policy, State Water Resources Control Board, Resolution No. 2002-0040, at 19 ("CAOs should name all dischargers for whom there is sufficient evidence of responsibility[.]"); In the Matter of the Petition of Exxon Company, State Board Order No. WQ 85-7, at 6 ("Generally speaking it is appropriate and responsible for a Regional Board to name all parties for which there is reasonable evidence of responsibility, *even in cases of disputed responsibility.*") (emphasis added); 23 Cal. Code Regs. § 2907 ("Regional Boards shall ... [n]ame other dischargers as allowed by law[.]"). NASSCO, therefore, requests that the Water Board invite the responsible parties to participate in any investigation or remediation of sediment that may be required at NASSCO.

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B. TECHNICAL INFEASIBILITY

The technical reports from the Port and City, and the Navy work referenced therein, show that municipal storm water from Chollas Creek has been, and continues to be, a significant source of pollutants in the area of the NASSCO leasehold. See City Report at 5-8; Port District Report at 32-35; see also Attachment "B" at 228 (Figure 3). The City confirms that the storm water is contaminated and will continue to be so for some time. The City plans to implement corrective measures that "aim[] to identify the water quality status and trends," but nowhere does the City state that municipal storm water will meet applicable requirements. See City Report at 18-19. Thus, pollutants from Chollas Creek (and other storm water sources) will continue to impact the sediments at the leasehold. Indeed, in proceedings related to the recent issuance of the MS4 permit, Water Board staff announced that "the [proposed permit] has the *potential* to 'improve' the quality of San Diego receiving waters *over the long term* (i.e., 10-20 years)". See Attachment "C" (Water Board staff responses to comments on the draft MS4 permit)(emphasis added).³ Hence, logically, remediation of impacted sediments is infeasible because a source of pollutants (municipal storm water) will continue to contaminate the sediments, over a long term. This is precisely the conclusion that was reached by the environmental consulting firm conducting the site investigation at NASSCO. See Exponent Report, at 19-13; see also Letter from L. McVey to D. Barker, dated June 9, 2004.

Because municipal storm water discharges into the NASSCO shipyard, and is a continuing source of contaminants of concern, it is technically infeasible to successfully remediate the sediment to any standard below the contaminant levels resulting from the contaminated water in storm drains and Chollas Creek. The primary source of pesticide contamination in the sediment at NASSCO is likely from Chollas Creek and the storm drains, and pesticides are the most likely cause of adverse biological effects at the leasehold. Until this source is contained, the benefits of any remediation at the site would be lost as water quality conditions return to their pre-remediation conditions.

³ To support this finding, the Regional Board staff testified at a hearing on December 13, 2000, as follows: "[The municipal storm water] permit has the ability to *slow down the ongoing degradation* of our receiving waters and the *potential* to actually *improve* the quality of our receiving waters, inland and coastal waters here in San Diego. And when I say that, I want to make sure you understand that *I don't mean overnight*. I mean *over a long period of time in the long-term*, and we're talking about *at least 10 to 20 years*." See Attachment "C" (emphasis added).

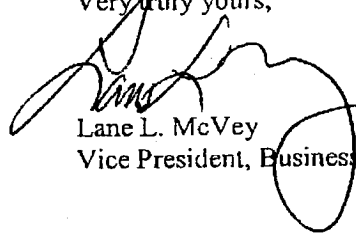
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In light of the reports submitted by the City, Port, and Exponent, support of NASSCO's proposal of monitored natural attenuation continues to be the most appropriate action for the Water Board to take at this time. The existence of continuing sources of pollution at the NASSCO site mandate the adoption of a remediation approach that fully addresses those sources. NASSCO, therefore, urges the Water Board to provide ample time, both before and after the issuance of any draft Cleanup and Abatement Order, for consideration of alternative approaches that consider all sources of continuing contamination. Such a dialogue should include all responsible parties and allow time for meaningful discussion of the issues.

Please contact me if you have any questions or comments.

NATIONAL STEEL AND
SHIPBUILDING COMPANY

Very truly yours,



Lane L. McVey
Vice President, Business Affairs and Law

Enclosures

ATTACHMENT A

Exponent

Exponent
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September 29, 2004

Lane McVey
NASSCO
Harbor Drive and 28th Street
Mail Stop 22-A
San Diego, CA 92186

Subject: Review of 13267 Responses
Project No. 8601718.002

Dear Lane:

Exponent staff have reviewed the materials provided to the Regional Board in response to their Investigation Orders R9-2004-0026 and R9-2004-0027 (13267 responses). These materials are from the following parties:

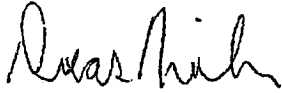
- U.S. Navy
- Unified Port District of San Diego
- City of San Diego
- Marine Construction and Design Co.
- SDG&E
- Chevron
- ARCO.

In addition, we have reviewed the Navy poster on Chollas Creek outflows that was cited in the City's 13267 response. The purpose of our review was to identify technical issues or conclusions contained in the 13267 responses that were incompletely or incorrectly presented, or that otherwise bear further examination. The review was carried out by examining both the summary section of each response and any additional sections that contained more detailed discussion of any technical points.

Lane McVey
September 29, 2004
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A summary of the results of this review is contained in the attached document. If you would like us to pursue any topics or analyses in greater depth, or have any questions about the enclosed material, please do not hesitate to call me at (425) 643-9803.

Regards,



Dreas Nielsen
Project Manager

Attachment

Review of 13267 Responses

This document summarizes the results of a review of responses to the San Diego Regional Water Quality Control Board's Investigation Orders R9-2004-0026 and R9-2004-0027 (13267 responses). Responses were received from several parties, and differed substantially in the type and amount of detail that they contained. Exponent's review addressed only the technical content of these responses; specifically content relating to the potential for sediment contamination. Because Exponent has not conducted a thorough independent investigation of past activities and practices at the properties adjacent to the shipyards, our review also has not comprehensively addressed the completeness of the responses. Finally, Exponent has not tried to interpret the overall responsiveness to the Orders.

In general, all of the 13267 responses contained relatively little technical content. In those cases where past activities might have contributed to sediment contamination, little concrete detail has been provided. Technical issues that are raised by information in the responses are discussed in the following sections, by respondent.

U.S. Navy

The U.S. Navy (Navy) describes past (approximately 1938–1956) features and activities in the area of NASSCO's graving dock consisting of piers, small boat launch maintenance, small shops on the north side of the 28th Street pier (battery shop, machine shop, planing mill, electric shop, naval stores, mill work office, pipe shop, mold loft), a boat way, and an overhead crane. Contaminants that were potentially introduced to site soils and sediments include the following:

- PAH from creosoted timbers of the piers and boat way, and possibly from crossties of the tracks of the overhead crane.
- Metals from wastes of the battery shop, machine shop, pipe shop, and paint used in maintenance activities.
- PCBs from hydraulic fluid leaks from the overhead crane and machinery contained in the machine shop and planing mill, and possibly also from electrical equipment in the electric shop.

In the absence of a collection system for surface runoff, that runoff would likely have conveyed spills and other releases to San Diego Bay. Therefore, although the soil in the area of the Navy's historical occupancy may have been entirely removed during the construction of the graving dock, runoff from that area may have affected sediment in the central part of NASSCO's current leasehold.

September 29, 2004

Unified Port District of San Diego

The Port's report contains copious information on site occupancy (which was not reviewed in detail), but relatively few specifics about historical sources.

The document identifies Kelco as a potential source of sediment contaminants. A sediment core sample was taken off of Kelco in 1974 and analyzed for oil and grease, cadmium, lead, mercury, and zinc. The results are included in Appendix M of the Port's report. The location of this core relative to the samples taken in 2001 and 2002 is of potential interest, because the data provide a limited look at "historical" conditions and might be used to draw inferences about either the spatial extent or the time course of sediment contamination. The value of these data for comparison to more recent surface chemistry data is limited, however, because of the different depth intervals, absence of information on analysis methods, and the lack of any evident data validation (the laboratory report is one page long and contains no quality control information).

The Port's 13267 response also identifies Savage Tire as a potential source of sediment contaminants. Based on the description of Savage Tire's operations that is in the report, this is a plausible conclusion. The only apparent pathway from the Savage Tire facility to San Diego Bay is through the city sewer or storm drain systems.

City of San Diego

Comments Relating to Shipyard Reports

The City makes several arguments in both of the reports for NASSCO and Southwest Marine:

City Comment 1. There is no decreasing gradient of sediment contamination in the bay with distance away from the mouth of Chollas Creek, so Chollas Creek cannot be a source.

The data and analyses used to justify this statement are not presented. The conclusion is not consistent with the identification of Chollas Creek as a hot spot that has higher concentrations than adjacent areas of the bay. Figures 5 and 6 of the Navy poster (addressed in more detail in the following subsection) clearly show evidence of a spatial gradient—a plume—of contaminant concentrations and TSS off of Chollas Creek. Processes such as chemical precipitation in salt water, flocculation of solids, and particle settling in slower-moving bay water will transport this material from the water column to the sediment. Thus, the Navy poster provides strong evidence that Chollas Creek outflow will contribute sediment contaminants to both the NASSCO and Southwest Marine leaseholds. Sediment data from the Navy's 2001 Chollas/Paletta investigation will likely also allow the City's statement to be evaluated, when those data are made public. Although sediment disturbance in some locations may obscure gradients over short distance (e.g., where affected by dock trials at NASSCO), from an overall perspective, the City's statement appears to be unsupported.

City Comment 2. Old pilings, cut off at the water line, may be sources of PAH (creosote).

This statement may be true, and this and other sources of PAH would make it difficult to quantify the impact of PAH from Chollas Creek. However, the statement does not constitute an argument that Chollas Creek is not a source of PAH.

City Comment 3. Outfalls SW3, at NASSCO, and SW4, at SWM, are not (or "not confirmed as") part of the City storm drain system.

Outfall SW3, instead of SW9, is erroneously marked as a current storm drain outfall on Figure 1-4 of our investigation report. The text of the report (page 1-16) correctly identifies SW9 as the City outfall discharging to the NASSCO leasehold. There seems to be no basis for the claim that SW4 is not part of the City storm drain system. Figure 3 in ARCO's 13267 response also shows SW4 as a discharge point for the City's storm drain system. Procurement of a current storm drain system map should be sufficient to respond to this comment.

Comments Relating to U.S. Navy Poster

The City also makes several comments pertaining to a poster prepared by the Navy ("Spatial and Temporal Evolution of Storm Water Plumes Impacting San Diego Bay," authored by Katz, Carlson-Blake, and Chadwick) that was provided by Regional Board staff. A copy of this poster was obtained; the City's comments based on their review of this poster, and Exponent's remarks about these comments, are as follows.

City Comment 4. Analytical and sampling differences between samples collected upstream in Chollas and Paleta creeks, at the Navy outfalls, and in San Diego Bay near the mouths of the creeks may result in incompatible data. The City lists the following factors as contributors to data incompatibility: 1) timing of sampling in different locations and relative to the course of the storm; 2) use of different "strategies" for sampling; and 3) salinity effects as fresh water enters the bay. These comments imply that the data—and therefore the conclusions—presented on the poster are unreliable, but do not say so explicitly.

It is always true that inappropriate sampling or analytical techniques can produce unreliable data. However, although the City's comment lists some important considerations, it does not demonstrate that the data were, in fact, collected inappropriately, or that the data are therefore unreliable. The poster does not provide enough information about the timing of sampling to substantiate the City's critique with regard to timing or "strategies" (presumably referring to sample compositing) of sample collection. Conversely, the lack of information does not allow a definitive refutation of the City's implication. Although upstream samples were flow-averaged composites, Navy outfall samples were time-averaged composites, and bay samples were single grab samples, this sampling design might or might not be the most appropriate to produce representative measures of each medium.

With regard to salinity effects, the City says that one effect is release of contaminants from particles into a dissolved form. This is not necessarily true. The higher concentration of salt in marine water reduces the solubility of most chemicals, thereby reducing their dissolved concentrations. The City also comments on the potential effects of analytical interferences from

salt and of flocculation that occurs when fresh water enters the marine environment. Both of these comments by the City are appropriate.

City Comment 5. The City criticizes the comparison of TSS contaminant levels with sediment chemistry benchmarks, on the basis that the TSS contaminant levels are in micrograms per liter ($\mu\text{g/L}$), whereas the sediment benchmarks are in milligrams per kilogram (mg/kg).

The figures on the Navy poster (8a and 8b) show unitless ratios. The fact that no units are shown indicates that the ratios were formed from values with identical units—for example, mg/kg for both TSS and sediment benchmark concentrations. Neither the figures nor the accompanying text, however, definitively identify the actual units of the values used to form the ratios. The text of the Navy poster refers to use of “storm water particle contaminant concentration” data, which also strongly implies that the TSS contaminant levels were based on particle mass (e.g., mg/kg) rather than sample volume. The Navy measured both total and dissolved forms of contaminants, as well as TSS, so it is straightforward to calculate the contaminant levels on suspended particles to obtain a value in mg/kg that can be compared to sediment benchmarks. However, the poster does not provide a sufficiently detailed description of the methods used to definitively confirm that the Navy took the correct approach. Thus, the City's assertion that the TSS contaminant levels were in $\mu\text{g/L}$ is not supported by the poster itself, and appears to be based on either speculation or an assumption that the Navy did not calculate TSS contaminant concentrations correctly.

City Comment 6. The City also criticizes the comparison of TSS contaminant levels with sediment chemistry benchmarks on the basis that TSS and sediment are “not the same type of material.”

Bay bottom sediments, in San Diego Bay elsewhere, are primarily derived from material carried into the bay by inflows such as Chollas and Paleta creeks. Suspended solids (TSS) and sediment are both composed of organic and inorganic fractions. The inorganic fraction of TSS in freshwater inflows is essentially the only source of inorganic material in sediments. TSS and sediment may differ in their organic content, however, because organic material is created and destroyed more readily. Thus, TSS may contain an organic component that is broken down before it is incorporated into the sediment, and sediment may contain organic detritus from phytoplankton or other marine organisms. No measurements of TOC in Chollas and Paleta creeks are available for comparison to bay sediment, so it is not possible to say definitively how the TOC content of TSS in the creeks compares to that of bay sediment. TOC in sediment near the shipyards is typical of nearshore sediments generally (about 2 percent), indicating that there is not a large component of phytoplankton detritus.

In its discussion, the City states that it assumes the TOC content of TSS to be 20 to 40 percent. This is quite a high value, and the City does not provide any rationale or citation to support it. Such a high fraction of TOC might be found in the outflow of a marsh, or in sewage treatment plant effluent, but no such sources of highly organic material are known in the Chollas and Paleta creek watersheds. In contrast, typical uncontrolled stormwater runoff tends to be high in solids with a low TOC content. Therefore, without measurements, known sources, or some other compelling rationale to support it, the City's assumption about TOC cannot be regarded as accurate.

Particle sizes may also differ between TSS and sediment. Suspended solids may contain a higher fraction of fine particles than bottom sediment, including particles that are so fine that they may not settle at all. The finest of these particles, however, are likely to be lost during the filtration step that is used to isolate suspended solids. Fine particles may also be winnowed from deposited sediment as a result of sediment disturbance. As a consequence of these effects, the particle size distributions of TSS and sediment may differ. Finer particles have a higher ratio of surface area to mass than coarser particles, and contaminants that adsorb to particle surfaces will therefore have a higher concentration (when expressed in terms of particle mass) on finer particles.

Thus, in the absence of definitive information to the contrary, the particles represented by the Navy's TSS measurements in the creeks may be of the same *type* as those of bay bottom sediment, although of different sizes. Consequently, if narrowly interpreted, the City's criticism that sediment benchmarks do not apply to TSS because of different particle types appears to be invalid.

Despite these weaknesses in the City's arguments, application of sediment benchmarks to TSS is nevertheless inappropriate. This is so because of:

- The likelihood of particle size differences between TSS and sediment, and corresponding differences in chemical concentrations.
- The fact that the TSS measurements represent an instantaneous condition of contaminant loading, whereas sediment represents a long-term integration of contaminant loading. Dilution of freshly deposited material and chemical and physical changes that occur in sediment over time can alter chemical concentrations and bioavailability.
- The fact that sediment benchmarks were developed based on toxicity tests of bottom sediment, and not TSS. The validity of extrapolation of toxicity test results from sediment to TSS has not been demonstrated and is not scientifically defensible.

City Comment 7. The City concludes that "organic contaminants are historical issues and are mostly a regional not localized source issue." The conclusion regarding a regional rather than a localized source is based on plots of TSS and total chemical concentrations in surface water.

Nothing on the poster supports the conclusion that organic contaminants are historical issues. In contrast, the data presented on the poster indicate that Chollas and Paleta creeks are ongoing sources of organic contaminants.

- The analyses of TSS vs. chemical concentrations that are presented in the City's report have several limitations or flaws: data are available from only one upstream station in each creek, the Navy outfall, and three locations in the bay immediately off the creek mouths. As the Navy study shows, the stations in the bay are heavily influenced by the creeks. Thus, there are effectively only three types of stations represented: a) surface water in

Chollas Creek or heavily influenced by it; b) surface water in Paleta Creek or heavily influenced by it; and c) Navy outfalls. There are no stations elsewhere in San Diego Bay or in other creeks. Therefore, this data set is insufficient to draw conclusions about whether the observed data represent regional conditions. At best, this data set might be used to draw conclusions about whether Chollas and Paleta creeks are influenced by the same sources, and whether the Navy outfalls are typical of those sources.

- The City's assumption that the relationship between chemical concentrations and TSS is less variable than that of chemical concentrations alone is not necessarily correct. The City makes no attempt to support the assumption by an analysis of the data. Because samples were collected before, during, and after a storm event, variations might be expected. Indeed, the fact that the City identifies the storm event samples C1 and C2 as "outliers" in several of their regression analyses indicates that this variation is present. These samples should not be identified as outliers because there is a plausible explanation for their variation. It is not clear whether the City actually excluded these "outliers" from their analysis; if they did, they have effectively said, "We assumed that a constant relationship exists, and any data that does not fit that relationship was declared an outlier and discarded, and we have thereby shown the existence of a constant relationship."
- The relationship between chemical contaminants and TSS may be controlled more by sorption processes than by sources. When contaminants and particles have been in contact long enough for sorption processes to reach a steady state, the observed TSS:contaminant relationship will reflect that steady-state condition. Thus, the City's argument that a constant relationship is indicative of regional sources is fallacious, because an alternative explanation for a constant relationship is the existence of a steady-state sorption condition.
- The City confuses an equivalent relationship between the two creeks with a constant relationship. Their argument is that a constant relationship indicates a regional source. Regardless of the merits (or lack thereof) of this argument, the City misapplies it by focusing on the similarity of the relationship between the two creeks rather than whether or not there is a constant (linear) relationship. The relationship between TSS and HPAH is an example. The City concludes that there is a regional source of HPAH based on the similarity of the relationship between the two creeks and the high correlation coefficient. In actuality, however, there is not a constant relationship between TSS and HPAH, which is an essential premise of their argument. In this and other cases where there are non-linear relationships between TSS and contaminants, the City does not evaluate whether the changing relationship is related to location.

Overall, the question of whether or not the TSS:contaminant relationships in these creeks are constant, or consistent between creeks, is separate from the question of whether or not the

creeks are important local sources of contaminants. Regardless of the constancy or consistency of the relationship, the creeks do appear to be an important and ongoing source of contaminants to the area of the shipyards.

Marine Construction and Design Co. (MARCO)

MARCO's one-page response contains no technical content.

SDG&E

There are several potential issues related to the SDG&E response:

SDG&E Comment 1. On page 31 the report states: "PCTs would be detected in routine PCB analyses if they were present."

This is untrue, or disingenuous at best. Although the chromatograms from the analytical instrument may show peaks that are attributable to PCTs, if PCT standards have not been analyzed, and a calibration curve has not been prepared, and the laboratory analyst is not actively looking for PCT peaks, then any PCTs that are present will not be observed, quantified, and reported. Thus, the fact that PCTs are not listed in the laboratory reports does not provide any evidence that PCTs were not present.

SDG&E Comment 2. SDG&E has prepared figures showing (hypothesized) current flows around the cooling water (CW) intake and discharges.

Based on the location of the circulating water intake and discharge, and the position of sheet pile bulkhead, SDG&E has inferred patterns of water movement and sediment transport. These current flow lines appear to be conjecture, because they are apparently not supported by any sort of hydrodynamic modeling and do not take into account other nearby structures, bathymetry, and tidal or other flows. However, the revised chemical distribution maps prepared by SDG&E using this analysis do not seem to be instrumental in making the case that SDG&E was not a source of sediment contaminants.

SDG&E Comment 3. SDG&E states that butyltin "is not related to power plant discharges."

Organotin compounds were used as acid scavengers in transformer fluid (Hirschland and Banks 1959). Through leakage of transformer fluid into the plant sumps, and discharge of the sumps into the circulating water discharge pipe (a pathway documented by SDG&E), organotin compounds may have been transferred from the Silver Gate power plant to San Diego Bay sediment.

Intake cooling water at the Silvergate power plant may have been treated with toxic compounds to prevent fouling, a common practice. These antifouling compounds may have included butyltins (or other chemicals such as chromium compounds), and would have been discharged back to the bay with the cooling water effluent.

Other issue: Constituents in SDG&E's wastewater ponds.

The investigation report for the Silvergate power plant's wastewater ponds documents that only Aroclors[®] 1254 and 1260 were detected in the ponds. These are also the primary Aroclors[®] present in sediment in the Southwest Marine leasehold. Total petroleum hydrocarbons and heavy oil were also found in the area of the wastewater ponds, and diesel- and residual-range organics also had a local maximum in nearby sediment stations.

An issue not addressed by SDG&E, nor apparently by any investigation conducted to date, is the possibility of infiltration from these wastewater ponds into the circulating water tunnels. The construction and integrity of the tunnels, as well as the location of the ponds relative to the tunnels, should be determined to evaluate this possibility.

Chevron

The primary issue relating to information in the Chevron response is the physical relationship between the contaminated soil and groundwater adjacent to the facility and the City's storm drain system. Figure 4 of Chevron's report indicates that the area of contamination overlaps with a leg of the City storm drain network (see Figure 3 of ARCO's report) that discharges at SW4. If groundwater levels are high enough, there could have been infiltration directly to the storm drain system.

Chevron also claims that there are no reports of oil entering San Diego Bay as a result of the 1913 fire. This is contrary to the implication of other accounts of the fire. For example, the San Diego Fire-Rescue department says that the Standard Oil pier caught fire,¹ implying that the burning oil reached the water's edge.

ARCO

As for Chevron, the area of petroleum contamination under the ARCO facility appears to overlap with the City storm drain system, so that there is a possibility that infiltration to the storm drain system might have caused petroleum hydrocarbons from the site to be discharged at SW4.

Summary

Issues related to the 13267 responses that have the greatest relevance to sediment contamination are listed below.

- The City's assertion that the absence of chemical gradients in sediment near the mouth of Chollas Creek indicates that Chollas Creek is not a source
- The City's assertion that SW4 is not linked to the storm drain system

¹ See <http://www.sarnet.gov/fireandems/about/stand.shtml>.

September 29, 2004

- The City's assertion that organic contaminants are a regional issue and not related to discharges from Chollas Creek
- SDG&E's assertion that PCTs would have been detected in their PCB analyses, had PCTs been present
- Use (or non-use) of antifouling compounds in cooling water for SDG&E's Silvergate power plant
- Potential infiltration from SDG&E's wastewater ponds to the circulating water tunnels
- Potential infiltration from contaminated soil or groundwater at the Chevron and ARCO terminals to the storm drain system.

All of these issues are potentially feasible to address in greater detail following the collection of additional information. The level of effort that would be required to do so varies considerably, however. Additional information regarding each of these issues would provide greater certainty regarding potential sources of sediment contamination in the area of the shipyards.

Reference

Hirschland, H.E., and C.K. Banks. 1959. Organotin compounds. pp. 204–211. In: Metal-Organic Compounds. First edition. ACS Applied Publications. American Chemical Society, Washington, DC.

ATTACHMENT B

Stormwater toxicity in Chollas Creek and San Diego Bay, California

Kenneth C. Schiff, Steven M. Bay, and Darlo W. Diehl

ABSTRACT - Stormwater discharges from Chollas Creek, a tributary of San Diego Bay, have been shown to be toxic to aquatic life. The primary objective of this study was to provide the linkage between in-channel measurements and potential impairments in the receiving waters of San Diego Bay. This study addressed this objective within the context of four questions: (1) How much area in San Diego Bay is affected by the discharge plume from Chollas Creek during wet-weather conditions? (2) How much of the wet-weather discharge plume is toxic to marine aquatic life? (3) How toxic is this area within the wet-weather discharge plume? and (4) What are the constituent(s) responsible for the observed toxicity in the wet-weather plume?

The stormwater plume emanating from Chollas Creek was dynamic, covering areas up to 2.25 km², based upon measurements of salinity and turbidity. Approximately half of the plume was estimated to be toxic to marine life, based upon the results of purple sea urchin (*Strongylocentrotus purpuratus*) fertilization tests. The area nearest the creek mouth was the most toxic (NOEC = 3 to 12% plume sample), and the toxicity decreased with distance from the creek mouth. The toxicity of plume samples was directly proportional to the magnitude of plume mixing and dilution until, once outside the plume margin, no toxicity was observed. Trace metals, most likely zinc, were responsible for the observed plume toxicity based upon toxicity identification evaluations (TIEs). Zinc was also the constituent identified from in-channel samples of Chollas Creek stormwater using TIEs on the storms sampled in this study, and in storms sampled during the previous storm season.

INTRODUCTION

Stormwater inputs are a large source of pollutants discharged to receiving waters around the country (U.S. EPA 1995a). In southern California, stormwater inputs are among the largest of all sources that discharge pollutants to our coastal water bodies (Schiff *et al.* 2000). Runoff in the southern California region is exacerbated by the area's expansive urbanization, which increases the number of potential non-point sources and promotes runoff due to a larger proportion of impervious surfaces (e.g., cement).

The problem is compounded further as a result of the area's infrequent, but intense rainfall events, which promotes the build-up of potentially toxic constituents.

Previous monitoring of urbanized watersheds in San Diego demonstrated that stormwater runoff discharges significant loads of pollutants and was toxic to aquatic life (Schiff and Stevenson 1996, Skinner *et al.* 1998). One such watershed is Chollas Creek, a heavily urbanized (>83% developed) tributary to San Diego Bay. Samples collected near the end of the Chollas Creek channel, approximately 5 km upstream of San Diego Bay, were exposed to both marine and freshwater organisms (Schiff *et al.* 2001). Chollas Creek runoff was toxic to both the freshwater and marine organisms; however, the marine organisms were more sensitive (i.e., their response indicated more toxicity). To determine which constituent(s) were responsible for the observed toxicity, toxicity identification evaluations (TIEs) were also conducted on samples of wet-weather discharges from Chollas Creek. Trace metals, most likely zinc, were the constituents responsible for the toxicity to the purple sea urchin. Managers have added Chollas Creek to the state's list of impaired waterbodies, the 303(d) list.

Although in-channel samples of stormwater discharge were shown to be toxic from Chollas Creek, the potential effects that may exist in the marine receiving waters of San Diego Bay remain unknown. This is a common problem nationwide for many stormwater monitoring programs that conduct whole effluent toxicity tests. A link between in-channel measurements and measurements in the receiving water environment needed to be established. The primary objective of this study was to provide the linkage between in-channel measurements and potential impairments in the receiving waters of San Diego Bay. This study attempts to make the linkage by answering four questions: (1) How much area in San Diego Bay is affected by the

4.72 hr to complete. Nine samples were collected for toxicity analysis. One sample was collected from the in-channel site upstream of the bay and eight samples were collected from receiving water sites that ranged from nearest the creek mouth to the open bay outside of the plume influence. The third event occurred on March 5, 2000, and was the largest event sampled. Rainfall quantities exceeded 1.6 cm and plume mapping occurred exclusively during ebb tide; tidal heights decreased 1.8 m during the surface water measurements. Plume mapping activities required 5.12 hr to complete. Nine samples were also collected for toxicity analysis during this event. One sample was collected from the in-channel site upstream of the bay and eight samples were collected from receiving water sites that ranged from nearest the creek mouth to the open bay outside of the plume influence.

Plume mapping

The extent of the stormwater plume varied by size of storm, but was large enough to extend across the bay beyond navigable waters (Figure 1). The area of decreased salinity, defined as ≤ 32 practical salinity units (psu), and increased turbidity, relative to open bay water, extended from less than 0.02 km² during the smallest storm event to 2.25 km² during the second runoff event. The most concentrated portions of the plume were always located nearest the creek mouth, within the channel leading to the bay, and decreased away from the creek mouth as mixing and dispersion with open bay water occurred. During

larger events, sufficient runoff volumes were discharged so that plumes were advected more than 2 km away from the Chollas Creek mouth out into the open bay.

Freshwater runoff plumes floated over the denser bay water and formed lenses that were thickest near the creek mouth and thinnest near the margins (Figure 2). The depth of the plume nearest the creek mouth ranged from 2 to 4 m, depending upon the amount of rainfall (i.e., discharge volume) and overall water depth. The vertical water column structure showed that complete mixing occurred within the first 400 m of the creek mouth during the first and smallest event, and extended more than 1,500 m offshore during the second runoff event. The second storm event also penetrated deepest into the water column.

Turbidity (transmissivity in beam C units) measurements also clearly defined the margins of the plume (Figure 2). Transmissivity results were similar to the salinity measures for the cross-shore water column structure; the thickest plume penetration was nearest the creek mouth, and the freshwater lens thinned near the plume margin out in the open bay. Transmissivity at the margins changed up to 20% within a distance of meters. These changes were so dramatic they were visible to field crews aboard the research vessel during surveys.

Spatial Extent of Toxicity

Tests of San Diego Bay surface water samples collected during three runoff events revealed the presence of toxicity offshore of Chollas Creek.

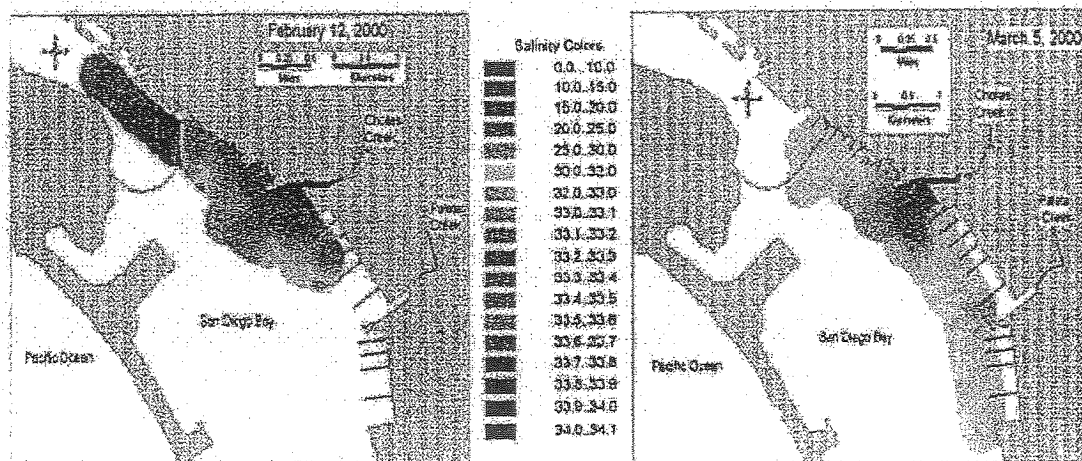


Figure 1. Surface plume mapping of salinity (in practical salinity units, psu) offshore Chollas Creek during two separate storm events (February 12 and March 5, 2000).

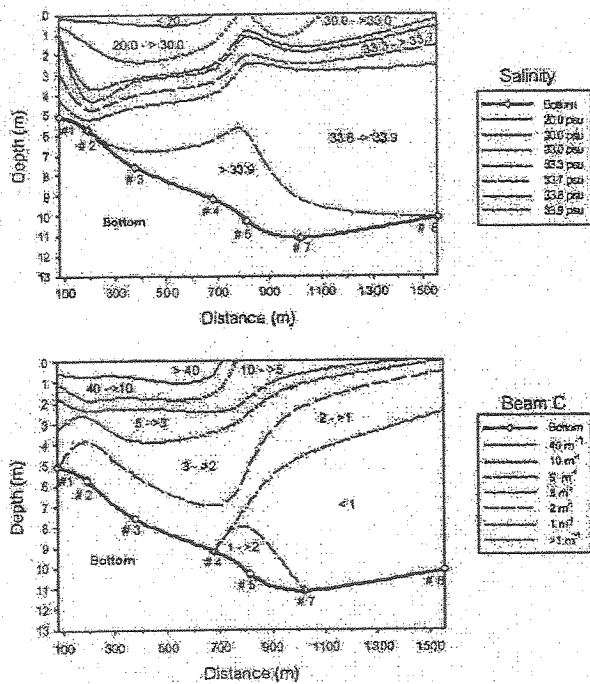


Figure 2. Salinity (practical salinity units, psu) and turbidity (Beam C attenuation in meters) in water column cross-section moving offshore from the Chollas Creek mouth into San Diego Bay following the second storm event (February 12, 2000).

Toxicity to sea urchin sperm was detected in all samples collected within the portion of the plume containing ~10% runoff (as determined from salinity measurements). Fertilization (normalized to the control response) in these samples ranged from 5 to 74%. The highest magnitude of toxicity was found in samples taken near the mouth of Chollas Creek. Reference samples of San Diego Bay water collected from 0.3 to 1.5 km outside of the plume were non-toxic, with fertilization values of 88 to 100%. Changes in toxicity corresponded with changes in salinity across the plume gradient emanating from Chollas Creek.

The boundaries of the discharge plume and the toxicity plume differed (Figure 3). In the second runoff event, the toxic portion of the plume (the region producing <80% fertilization), extended across 1.03 km² of the bay and comprised approximately 50% of the physical extent of the plume. The size of the toxic portion of the plume measured during the third runoff event was smaller, covering an area of 0.24 km², as was the physical extent of the plume during the third event (0.98 km²).

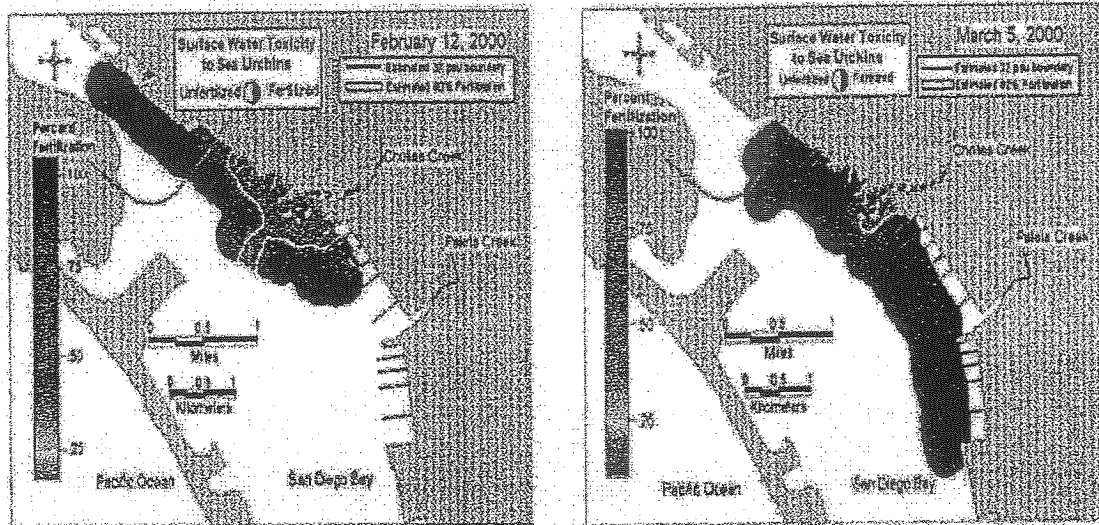


Figure 3. Map of surface layer water toxicity to sea urchins in San Diego Bay associated with Chollas Creek discharges following two separate storm events. The colors show the estimated percent of sea urchin fertilization based upon the toxicity results for water samples (indicated by pie diagrams) and measured salinity in the surface layer.

ATTACHMENT C

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STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL
BOARD SAN DIEGO REGION

Metropolitan Wastewater Department
Auditorium
9192 Topaz Way
San Diego, California
Wednesday, December 13, 2000

ITEM 5

(Reporter's Transcript of Proceedings)

PUBLIC HEARING: Tentative Order No. 2001-02, Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watershed of the County of San Diego, the Incorporated Cities of San Diego County and the San Diego Unified Port District (NPDES Permit No. CAS0108758).

CERTIFIED
COPY

REPORTED BY:
GRACE A. VERBOEVEN
CSR NO. 11419

PARK AVENUE DEPOSITION SERVICE
(800) 447-3376

1 document. It also impacts more receiving waters than
2 any other single permit.

3 It's five years overdue for reissuance, a
4 fact that most board members should be aware of already.
5 It's also based on both federal language and that all too
6 familiar Porter-Cologne Act, the state water code. It also
7 contains language that has been directed by the State Water
8 Resource Control Board in recent decisions on matters of
9 urban runoff regulation and the USEPA.

10 Staff has prepared what we feel is the right
11 permit to regulate these discharges at this time, and at
12 this time I would like to introduce Deborah Jayne from our
13 Storm Water Unit which actually doesn't exist anymore
14 because we re-organized the two watershed units. Deborah
15 Jayne?

16
17 DEBORAH JAYNE,

18 MS. JAYNE: Good morning Members of the Board and
19 distinguished guests. My name is Deborah Jayne. I am
20 an environmental specialist on your staff. I have
21 taken the oath.

22 Well, as you know, we haven't worked on this
23 permit for very long, and it hasn't generated much in the
24 way of public interest. But, nevertheless, we think that
25 it's extremely important. We feel that it's extremely

1 important because if properly implemented, this permit has
2 the ability to slow down the ongoing degradation of our
3 receiving waters and the potential to actually improve the
4 quality of our receiving waters, inland and coastal waters
5 here in San Diego.

6 And when I say that, I want to make sure you
7 understand that I don't mean overnight. I mean over a long
8 period of time in the long-term, and we're talking at least
9 10 to 20 years. Keep in mind that it has taken us many
10 years to degrade the quality of the water to the condition
11 that it is today, it will take us many years to restore it.

12 The restoration of our natural waterways,
13 that is why we are here today. That is what this
14 permit is about. That is the sole objective of this
15 permit. Remember too that we are protecting water
16 quality not for the sake of water quality, but for the
17 sake of the beneficial uses so that our waters will be
18 swimmable, so our waters will be fishable, and they
19 can support aquatic habitat.

20 So as we move through this process today, we
21 should always just keep in mind the underlying purpose
22 of what we're doing, and that is to restore the
23 beneficial uses to our creeks and to our waterways.
24 And this permit is driven by the water quality
25 outcomes, and I want to emphasize that.

ATTACHMENT 4

**Comparison Between the Requirements of
Tentative Order 2001-01, the Federal NPDES
Storm Water Regulations, the Existing San Diego
Municipal Storm Water Permit (Order 90-42),
and Previous Drafts of the San Diego Municipal
Storm Water Permit**

A table comparing the Tentative Order's requirements with the requirements of other pertinent documents.

PERMITS COMPARISON (DRAFT)

Comparison Between the Requirements of Tentative Order No. 2001-01, the Federal NPDES Storm Water Regulations, the Existing San Diego Municipal Storm Water Permit (Order No. 90-42), and Previous Drafts of the San Diego Municipal Storm Water Permit

Conclusions

1. Urban runoff causes or contributes to the impairment of every known impaired water body in the San Diego Region (i.e., every 303(d) listed water body in the Region is impaired, at least in part, because of urban runoff).
2. During the past 10 years (the period during which the Copermittees have been subject to Order No 90-42), water quality in the Region has continued to decline. The decline is the result of the increasing urban runoff pollution associated with the growth of the Region (i.e., increasing urban development and human population).
3. The continued degradation of the Region's receiving waters is evidence that current efforts to control urban runoff are not working (i.e., current Copermittee Urban Runoff Management Programs under Order No. 90-42 are either inadequate or ineffective). In other words, we are losing the battle against urban runoff pollution.
4. More must be done to reduce urban runoff pollutants if the beneficial uses (e.g., fishing, swimming, aquatic habitat, etc.) of the Region's receiving waters are to be protected.
5. Tentative Order No. 2001-01 (the proposed renewal of Order No 90-42) is the answer. If properly implemented, Tentative Order 2001-01 will significantly "slow the current rate" of water quality degradation in San Diego. Furthermore, the Tentative Order has the potential to "improve" the quality of San Diego receiving waters over the long term (i.e., 10-20 years).
6. Tentative Order No. 2001-01 is the product of an evolving development process that has included the release of two previous drafts and spanned more than six years. The Tentative Order incorporates the SDRWQCB's responses to over 200 pages of public comments on the 1995 and 1998 drafts of the permit.
7. Because Order No. 90-42, the interim drafts, and Tentative Order No. 2001-01 are all based on the same 1990 federal regulations, the underlying objectives and essential requirements of these documents are all "fundamentally the same". In other words, Tentative Order No. 2001-01 is not a "new" permit. It has the same underlying objectives and requirements as Order No. 90-42, the "early" first round permit to which the Copermittees have been subject for the past ten years.

**Final Report
Site Remediation
Marine Railway Removal Project
Southwest Marine Shipyard**

Prepared for
Southwest Marine, Inc.
Foot of Sampson Street
P.O. Box 13308
San Diego, California 92113

December 1998

OGDEN ENVIRONMENTAL AND ENERGY SERVICES

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SOUTHWEST MARINE, INC.
SOUTHWEST MARINE SHIPYARD
FOOT OF SAMPSON ST
SAN DIEGO NPDES
REPORT FILE: 7.1 12/1998-08/1999
03-0137.03 STATUS: C

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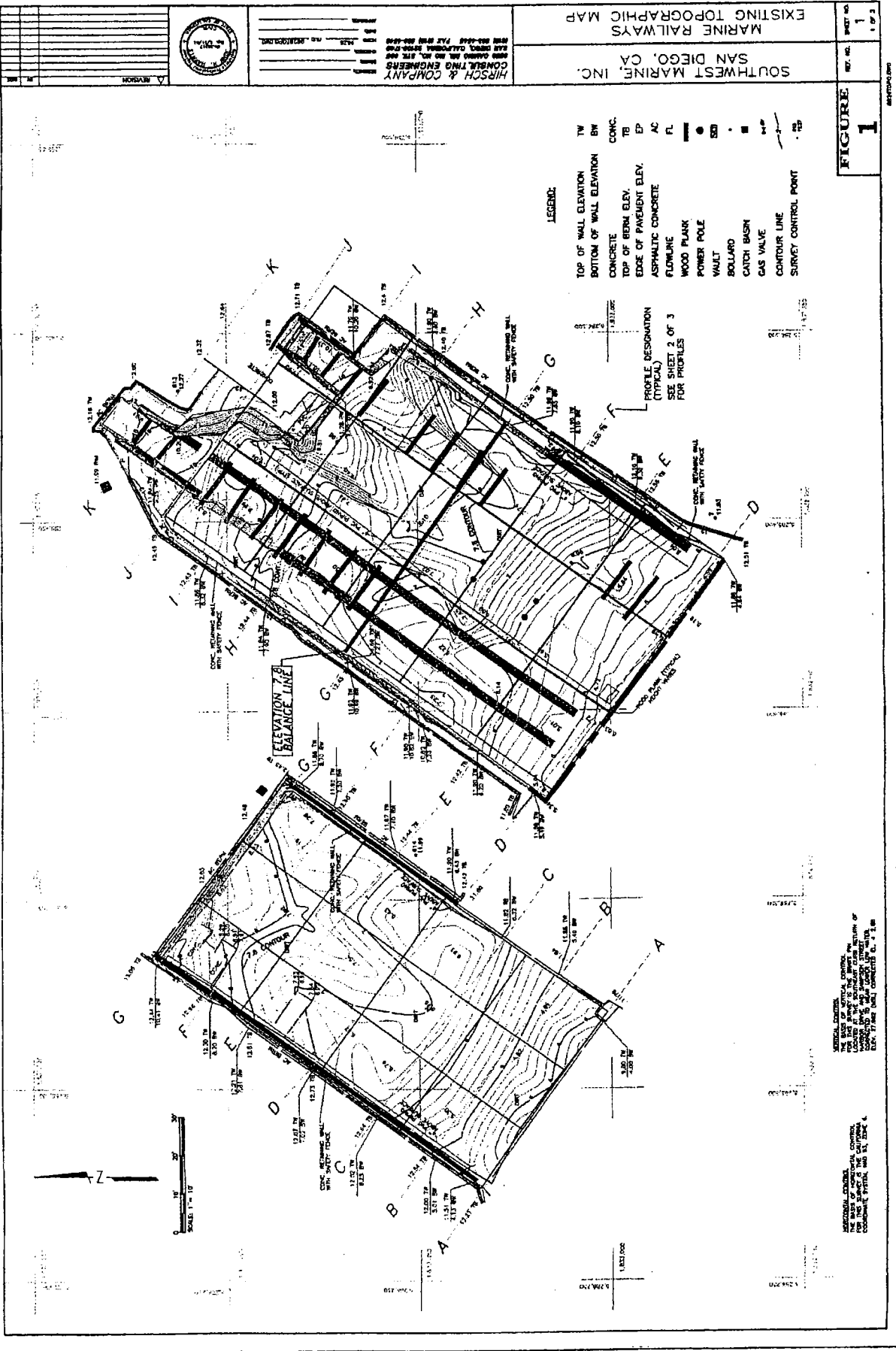
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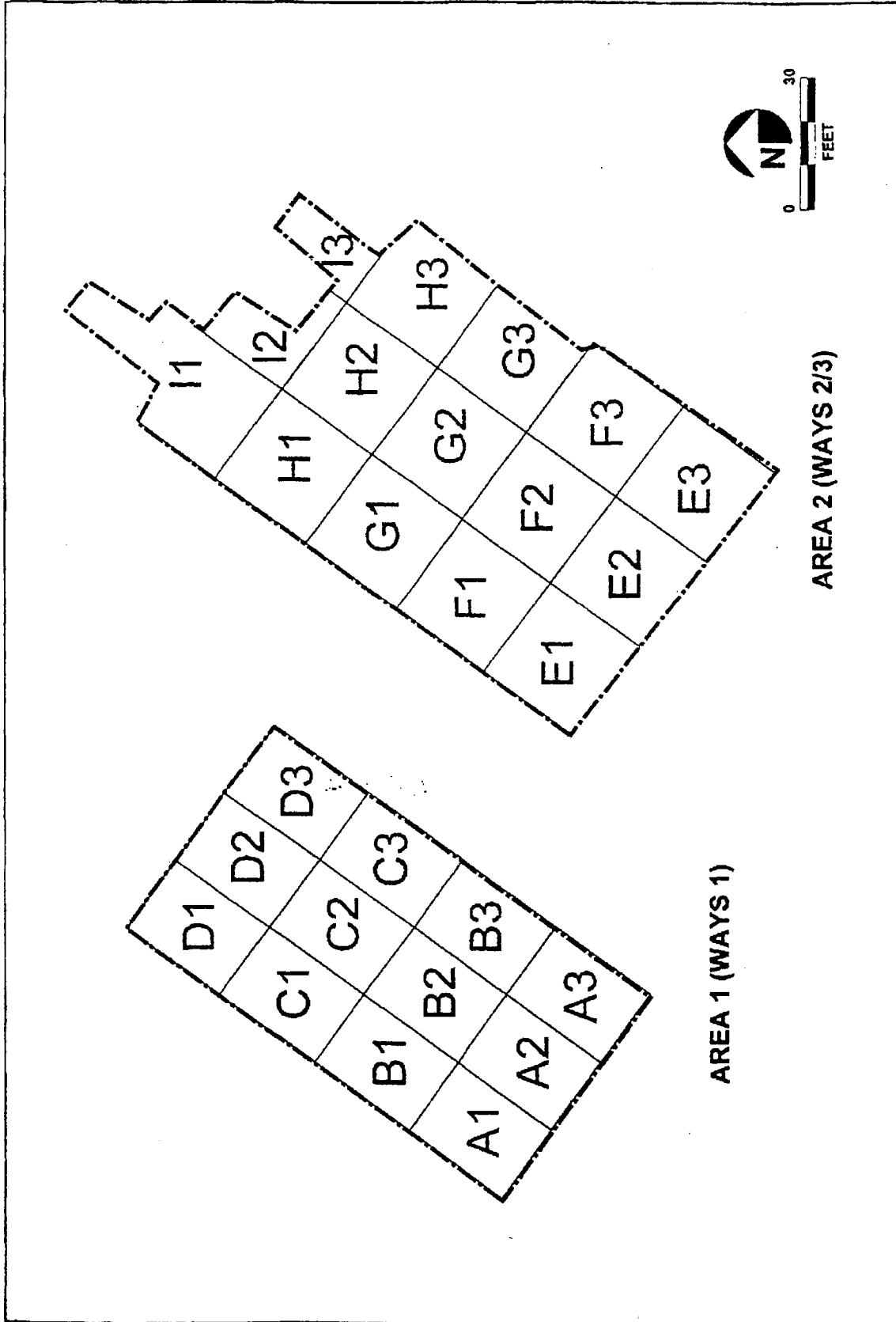
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C	Daily Observation Log Sheets
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FIGURE

2

Excavation/Confirmation Sample Locations



**Daily Log- Observations/ Turbidity Monitoring
Southwest Marine- Marine Railway Removal Project, Ways 1 & Ways 2/3**

Date: 7-17-78

Observer: R. S. F. F. F.

Weather: Cool, overcast, 65^{to} 78, clearing partial in afternoon

Observations:

	ways 1 time: 1:00	ways 2/3 time: 1:05	Comments
1) Appearance of oil or other materials of petroleum origin	yes/no	yes/no	oil seen (min) - appears to the extent that excavation/works (active) during course of weekend
2) Discoloration and extent of any visible turbidity plume	none/minor/significant	none/minor/significant	none/minor turbidity noted 0.5' water level of curtain under the way 2/3
3) Condition of silt curtain, and any turbidity	good/poor/unacceptable with silt water level (low turbidity)	good/poor/unacceptable	excavated materials placed (0.5') - silt, water with turbidity
4) Odors	none/minor/significant	none/minor/significant L.V. Plume (1.5)	sulfur odor during active excavation

Turbidity Monitoring:

	Station A (@ 0-10 feet) time: 07:00	Station B (@ >50 feet) time: 07:00	Difference (Sta A - Sta B)	Difference less than 20%?
Turbidity Units (122)	0.5 feet or less - no visible turbidity	2.0 meters - average out - clear water	0	yes/no - If no, halt dredging operations, see note.

Comments: A Succhi Disc will be used for turbidity measurements. Station A will be inside any visual plume if possible.
Note: If the turbidity at Station A increases more than 20% over the turbidity of Station B, the dredging operations shall be suspended and appropriate measures taken. These include notifying the Regional Board Executive Officer and implementing remedial measures.

Daily Log- Observations/ Turbidity Monitoring
Southwest Marine- Marine Railway Removal Project, Ways 1 & Ways 2/3

Date: 8-18-78

Observer: Carl Sappone

Weather: clear, sunny, wind NW @ 5+k

Observations:

	ways 1 time: 10	ways 2/3 time: 10:05	Comments
1) Appearance of oil or other materials of petroleum origin	(yes) no none visible at 10:05	(yes) no	THE OIL/WATER RAISE "EFFECT" ON OIL SPREAD INDICATED ON NW CORNER OF WAYS 2/3. RETURNED DURING EXCAVATION OF 8:34
2) Discoloration and extent of any visible turbidity plume	none/minor/significant SOME VISIBLE PLUME @ 10:05 EXTENT @ 10:30	none/minor/significant SOME VISIBLE PLUME @ 10:05 EXTENT @ 10:30	SOME ADDITIONAL EXPOSURE (VIEWING FROM SILT CURTAIN) @ 10:05 - WHEN EXCAVATION BEGINS UNDER PLUME (SOUTH WEST FACILITY) - REFERS BACK 8-R-16-1780-1400
3) Condition of silt curtain, and any turbidity	good (poor) unacceptable PLUME NOT VISIBLE EXTENT @ 10:05	good (poor) unacceptable PLUME NOT VISIBLE EXTENT @ 10:05	SEE COMMENT 2 ABOVE
4) Odors	none/minor/significant EXTENT @ 10:05	none/minor/significant EXTENT @ 10:05	

Turbidity Monitoring:

	Station A (@ 0-10 feet) time: 10:04	Station B (@ >50 feet) time:	Difference (Sta A- Sta B)	Difference less than 20%?
Turbidity Units (Feet)	PLUME NOT VISIBLE EXTENT @ 10:04	PLUME NOT VISIBLE EXTENT @ 10:04	PL	(yes) no - If no, halt dredging operations, see note.

Comments: A Speckli Disc will be used for turbidity measurements. Station A will be inside any visual plume if possible.
 Note: If the turbidity at Station A increases more than 20% over the turbidity of Station B, the dredging operations shall be suspended and appropriate measures taken. These include notifying the Regional Board Executive Officer and implementing remedial measures.

**Daily Log- Observations/ Turbidity Monitoring
Southwest Marine- Marine Railway Removal Project, Ways 1 & Ways 2/3**

Date: 8-19-98

Observer: R. S. K. 1725

Weather: clear, sunny 70-75 N/W wind 10-15 mph

Observations:

	ways 1 time: 0935	ways 2/3 time: 1008	Comments
1) Appearance of oil or other materials of petroleum origin	yes/no no visible oil or other materials	yes/no no visible oil or other materials	minor indication layer adjacent to visible collection ~ 0-50' outside excavation upon runs along pier
2) Discoloration and extent of any visible turbidity plume	none/ (min)/ significant 0-10' visible turbidity	none/ (min)/ significant some turbidity 0-5' visible	
3) Condition of silt curtain, and any turbidity	good/ (poor)/ unacceptable plume/ (no plume)	good/ (poor)/ unacceptable plume/ (no plume)	primary silt curtain undermined by pier near 12' bottom causing silt curtain multiple on ways 1 (2 sections) installed 8-19-98 (833-1202) secondary indication out from excavation nearby.
4) Odors	none/ (min)/ significant	none/ (min)/ significant	

Turbidity Monitoring:

	Station A (@ 0-10 feet) time: 0902	Station B (@ >50 feet) time: 0908	Difference (Sta A- Sta B)	Difference less than 20%?
Turbidity Units (NTU)	20.701 NTU clearly visible no petroleum layer	20.701 NTU clearly visible	0 minor silt needed above.	yes/no- If no, halt dredging operations, see note.

Comments: A Siccchi Disc will be used for turbidity measurements. Station A will be inside any visual plume if possible.
Note: If the turbidity at Station A increases more than 20% over the turbidity of Station B, the dredging operations shall be suspended and appropriate measures taken. These include notifying the Regional Board Executive Officer and implementing remedial measures.

**ANALYSIS RESULTS - EPA 8080, PCBs ONLY
POLYCHLORINATED BIPHENYLS**

CLIENT: SOUTHWEST MARINE

DATE SAMPLED: 08/20/98

PROJECT NAME/No.: WAY 1/2 & 3

DATE RECEIVED: 08/21/98

PTAS LOG #: 1673-98-2

DATE EXTRACTED: 08/21/98

SAMPLE ID: F2-1-10.0

DATE ANALYZED: 08/21/98

DILUTION FACTOR: 1

MATRIX: SOLID

SAMPLE VOL./WT.: 30 GM

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
AROCHLOR-1016	20	ND	24	ND
AROCHLOR-1221	20	ND	24	ND
AROCHLOR-1232	20	ND	24	ND
AROCHLOR-1242	20	ND	24	ND
AROCHLOR-1248	20	ND	24	ND
AROCHLOR-1254	20	ND	24	ND
AROCHLOR-1260	20	ND	24	ND

DL - DETECTION LIMIT

ND - NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.



**ANALYSIS RESULTS - EPA 8080, PCBs ONLY
POLYCHLORINATED BIPHENYLS**

CLIENT: SOUTHWEST MARINE

PROJECT NAME/No.: WAY 1/2 & 3
PTAS LOG #: 1673-98-3
SAMPLE ID: I2-1-3.5
DILUTION FACTOR: 500

DATE SAMPLED: 08/20/98
DATE RECEIVED: 08/21/98
DATE EXTRACTED: 08/21/98
DATE ANALYZED: 08/21/98
MATRIX: SOLID
SAMPLE VOL./WT.: 30 GM

ANALYTE	WET WEIGHT		DRY WEIGHT	
	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)	D.L. PPB (UG/KG)	RESULTS PPB (UG/KG)
AROCHLOR-1016	4,000	ND	4,170	ND
AROCHLOR-1221	4,000	ND	4,170	ND
AROCHLOR-1232	4,000	ND	4,170	ND
AROCHLOR-1242	4,000	ND	4,170	ND
AROCHLOR-1248	4,000	82,400	4,170	85,800
AROCHLOR-1254	4,000	ND	4,170	ND
AROCHLOR-1260*	10,000	66,800	10,400	69,600

DL - DETECTION LIMIT

ND - NON DETECT ABOVE INDICATED DETECTION LIMIT.

DETECTION LIMITS AND RESULTS HAVE BEEN ADJUSTED ACCORDINGLY TO ACCOUNT FOR DILUTION FACTOR.

* NOTE: THIS ANALYTE WAS DETERMINED AT A DIFFERENT DILUTION FACTOR.



QA/QC REPORT						
METHOD: PCB by EPA 8080-SOLID					ACCEPTABLE	ACCEPTABLE
DATE ANALYZED: 08/21/98					LCS/LCSD	RPD
QA/QC SAMPLE: PTAS 1673-98-1					CRITERIA	CRITERIA
SPIKED ANALYTE	LCS % R	MS % R	MSD % R	RPD	%	%
AROCHLOR-1254	85	110	121	10	29-131	<30

LCS % R - LABORATORY CONTROL SAMPLE PERCENT RECOVERY

MS % R - MATRIX SPIKE PERCENT RECOVERY

MSD % R - MATRIX SPIKE DUPLICATE PERCENT RECOVERY

RPD - RELATIVE PERCENT DIFFERENCE

AROCHLOR ACCEPTABLE CONTROL LIMITS:

AROCHLOR-1016	50-114
AROCHLOR-1221	15-178
AROCHLOR-1232	10-215
AROCHLOR-1242	39-150
AROCHLOR-1248	38-158
AROCHLOR-1254	29-131
AROCHLOR-1260	8-127



Solutions Taking Shape.

**Final Report
Site Remediation
Marine Railway Removal Project
Southwest Marine Shipyard**

Prepared for
Southwest Marine, Inc.
Foot of Sampson Street
P.O. Box 13308
San Diego, California 92113

December 1998

OGDEN ENVIRONMENTAL AND ENERGY SERVICES
■ ■ ■ ■ ■

SOUTHWEST MARINE, INC.
SOUTHWEST MARINE SHIPYARD
FOOT OF SAMPSON ST
SAN DIEGO NPDES
REPORT FILE: 7.1 12/1998-08/1999
03-0137.03 STATUS: C

jmsieno.com	EXHIBIT NO. _____
	1244
	Barber

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E	Final Hard Copy Data Packages - Sediment Samples

APPENDIX C

DAILY OBSERVATION LOG SHEETS

Daily Log- Observations/ Turbidity Monitoring
Southwest Marine- Marine Railway Removal Project, Ways 1 & Ways 2/3

Date: 8-11-98

Observer: K. SCHOTTLE

Weather: clear, water ~ 80°, wind SW

Observations:

	ways 1 time: 0750	ways 2/3 time: 1045	Comments
1) Appearance of oil or other materials of petroleum origin.	yes/no	yes/no none detectable (11-170)	SEE COMMENT 4 BELOW
2) Discoloration and extent of any visible turbidity plume	none/minor/significant none/minor	none/minor/significant extensive ~ 20 ft outside (~ 20 ft)	
3) Condition of silt curtain, and any turbidity zones made (LOW TIDE, NOISE, MINOR SPAKE TO BE FIXED 8-12-98 AT LOW TIDE)	good/poor/unacceptable good/poor/unacceptable SOME ADJUTANT NOISES HEARD	good/poor/unacceptable SOME ADJUTANT NOISES HEARD	SO ME GAUGE MATED ALONG SILT CURTAIN LOCATED - HEIGHTS w/ JUMP WAYS @ LOW TIDE
4) Odors	none/minor/significant REPAIRS BEING DONE	none/minor/significant	SMALL EXHAUSTION - COLLECT SAMPLE OF SURFACE WATER (~ 250 FT WAYS) @ EL. COLLECTOR (SWIMMING 1, 817) AREA (01105)

Turbidity Monitoring:

	Station A (@ 0-10 feet) time: 1110	Station B (@ >50 feet) time: 4.37 @ ~ 300'	Difference (Sta A - Sta B)	Difference less than 20%?
Turbidity Units WAY 2/3	0.6 A - AT STATION - ONLY V. MINOR CHANGE THROUGHOUT		D	yes/no - If no, halt dredging operations, see note.

Comments: A Siltch Disc will be used for turbidity measurements. Station A will be inside any visual plume if possible.
 Note: If the turbidity at Station A increases more than 20% over the turbidity of Station B, the dredging operations shall be suspended and appropriate measures taken. These include notifying the Regional Board Executive Officer and implementing remedial measures.

**Daily Log- Observations/ Turbidity Monitoring
Southwest Marine- Marine Railway Removal Project, Ways 1 & Ways 2/3**

Date: 8-12-98

Observer: E. Schaefer

Weather: HOT, SUNNY 75°, SEEBE (0-3K) IN AM, 2-5K IN PM

Observations:

	ways 1 time: 11:30	ways 2/3 time: 1740	Comments
1) Appearance of oil or other materials of petroleum origin	yes (no)	(yes/no) SLIGHT SLICK PATCHES ON APPROX. W20 C E 123, 15, 15, 13	NOTED TO BE RESIDUAL FROM OIL NOTED V. LIGHT PATCHY DISCOLORATION SILTY MUD AT THE BOTTOM OF THE PIT (FROM A NW DIRECTION)
2) Discoloration and extent of any visible turbidity plume	none/minor/significant SOME OILY DISCHARGE 5-10' OFF CURTAIN (CRATE STRE)	none/minor/significant SMALL WAVE CURTAIN	
3) Condition of silt curtain, and any turbidity	good/poor/acceptable 2 POINTS WITH V. MINOR FLOW THROUGH UNDER CURTAIN	good/poor/acceptable 1 POINT WITH MINOR FLOW THROUGH UNDER CURTAIN	TO BE REPAIRED (SEE ADDITIONAL SAND BARS) 8-13-98 C. OGDEN
4) Odors	none/minor/significant V. WEAK - DIS. BURN CHECK	none/minor/significant → FOR CORNER	NOTED LIGHT STATION ON WATER SURFACE IN AREA E 1, 2, 3, 4, 5

Turbidity Monitoring:

	Station A (@ 0-10 feet) time: 1045	Station B (@ >50 feet) time: 1050	Difference (Sta A - Sta B)	Difference less than 20%?
Turbidity Units (1500)	115 PORTION (0.5 M) EASILY VISIBLE NONE USED FROM PORT	4.2 TC ~250 (USED FROM FROM PORT)	0	yes (no) If no, halt dredging operations, see note.

Comments: A Succhi Disc will be used for turbidity measurements. Station A will be inside any visual plume if possible.
Note: If the turbidity at Station A increases more than 20% over the turbidity of Station B, the dredging operations shall be suspended and appropriate measures taken. These include notifying the Regional Board Executive Officer and implementing remedial measures.

Daily Log- Observations/ Turbidity Monitoring
Southwest Marine- Marine Railway Removal Project, Ways 1 & Ways 2/3

Date: 2-17-98

Observer: A. SUCCHI

Weather: cool, overcast, 65^o F, clearing partial in afternoon

Observations:

	ways 1 time: 1:00	ways 2/3 time: 1:05	Comments
1) Appearance of oil or other materials of petroleum origin	yes/no	yes/no	oil slick seen (times) - appears to the extent that operation/activities (continue) during course of work
2) Discoloration and extent of any visible turbidity plume	none/minor/significant	none/minor/significant	intermittent turbidity noted due to water movement of material under the pier piles @ 11:00.
3) Condition of silt curtain, and any turbidity	good/poor/unacceptable (low turbidity)	good/poor/unacceptable	check records sheet (2-11) - note silt curtain work.
4) Odors	none/minor/significant	none/minor/significant (1.0. Ammonia (1.0.))	slight odor during active excavation

Turbidity Monitoring:

	Station A (@ 0-10 feet) time: 07:00	Station B (@ >50 feet) time: 07:10	Difference (Sta A- Sta B)	Difference less than 20%?
Turbidity Units (FTU)	0.5 FTU - no visible turbidity	2.0 FTU - active out-cleaning visible	1.5	yes/no - If no, halt dredging operations, see note.

Comments: A Succhi Disc will be used for turbidity measurements. Station A will be inside any visual plume if possible.
 Note: If the turbidity at Station A increases more than 20% over the turbidity of Station B, the dredging operations shall be suspended and appropriate measures taken. These include notifying the Regional Board Executive Officer and implementing remedial measures.

Daily Log- Observations/ Turbidity Monitoring
Southwest Marine- Marine Railway Removal Project, Ways 1 & Ways 2/3

Date: 8-18-78

Observer: E. J. Schmitt

Weather: clear, sunny, wind NW 5-14

Observations:

	ways 1 time: / 0	ways 2/3 time: / 00	Comments
1) Appearance of oil or other materials of petroleum origin	(yes) no none visible except at point where excavation is taking place	Yes/no	The oil/water mixture "effect" on oil slicks was observed on NW corner of W-1-2/3. RETURNED DURING BREAKDOWN OF E-4
2) Discoloration and extent of any visible turbidity plume	none/minor/significant same visible turbidity 0-5' off curtain @ 153A	none/minor/significant some turbidity not from wharf observed indirectly	SOME ADDITIONAL OBSERVATIONS (W/WHARF) DOWN SILT CURTAIN @ 153A - WHEN OCCURRING RUNS UNDER PIER (SOUTH WEST FRONT) - REFINES TURE 2-R-153A-1480
3) Condition of silt curtain, and any turbidity	good/poor/unacceptable plume was under low water @ low tide	good/poor/unacceptable Silt curtain (1) small hole @ 10" w/ 6 shingles.	SEE COMMENT 2 ABOVE
4) Odors	none/minor/significant U. minor - during excavation.	none/minor/significant U. minor - during excavation.	

Turbidity Monitoring:

Station A (@ 0-10 feet) time: 1004	Station B (@ >50 feet) time:	Difference (Sta A - Sta B)	Difference less than 20%?
BEHIND CURTAIN WEATHER VISIBLE	BEHIND CURTAIN CLEANER VISIBLE		Yes/no - If no, halt dredging operations, see note.

Comments: A Saccchi Disc will be used for turbidity measurements. Station A will be inside any visual plume if possible.
 Note: If the turbidity at Station A increases more than 20% over the turbidity of Station B, the dredging operations shall be suspended and appropriate measures taken. These
 include notifying the Regional Board Executive Officer and implementing remedial measures.

SOUTHWEST MARINE

NPDES PERMIT
MARINE SEDIMENT MONITORING AND REPORTING
ANNUAL REPORT
AUGUST 2000

REPORT SERIES #13

REPORT PREPARED FOR SOUTHWEST MARINE BY:

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SOUTHWEST MARINE

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	1245
	Barker

SAR035020

**NPDES PERMIT
MARINE SEDIMENT MONITORING AND REPORTING**

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1.0 INTRODUCTION

In response to the State Water Resource Control Board Order No. WQ-88-4, the San Diego Regional Water Quality Control Board (SDRWQCB) has determined that a sediment monitoring program shall be added to the National Pollutant

were changed at each sampling location. Prior to sampling, each one liter jar was labeled with the sampling station designator number. For each sampling station a sediment sampling field control form, an example of which is in the Sampling Plan, was filled out. This form contains all necessary information including a brief description of the sample. Once the sample has been described and the control form filled out, the sample is placed in a cooler with blue ice. After each sampling day the samples are delivered to the chemistry lab for analyses. At this point a chain of custody form is filled out and retained by the lab with a copy remaining with the field control book. All field forms are retained on file by ECO-M for future reference. GPS Satellite positions (NAD27) were taken for each sampling location and were reported in the Sampling Plan.

2.2.2 CHEMICAL ANALYSIS

Chemical analyses were provided by **Pacific Treatment Analytical Services, Inc.** of San Diego, a State of California Certified Laboratory. All analyses have been done in accordance with the methods specified in the technical orders and addenda issued to this Yard. The following is a brief synopsis of the methods, cleanup procedures and extraction methods used to analyze samples for this program.

Organochlorine Pesticides, Polychlorinated Biphenyls (PCBs) and Polychlorinated Terphenyls (PCTs) are analyzed according to EPA Method 8080, as described in the EPA's Solid Waste manual (SW-846). This method uses a gas chromatograph (Mw) with an Electron Capture Detector (ECD) for ppb level determination. The ECD is a universal detector for pesticide analysis. The method uses capillary columns with temperature programming to ensure proper elution and acceptable chromatography. The unit performs dual column chromatography for confirmation as required by the method. The analysis of PCTs requires extended analytical runs.

In general, 8080 extraction requires 40 grams of sample. Sonication extraction method 3550: is used. If interferences are present the samples may have

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ECO-M

Discharge Elimination System (NPDES) permits of all shipyard and boatyard facilities within the San Diego Region. This report is filed in response to the above requirement. *Ecosystems Management Associates Inc.* is the contractor for the sediment sampling and monitoring program and has prepared this report for **Southwest Marine**.

2.0 DESCRIPTION OF SEDIMENT MONITORING PROGRAM

The requirements of the program (NPDES No. CAG039001; Order No. 97 - 36 Sec. G, pp. M-23 to M41), and the methods utilized to meet them are briefly described in this section.

2.1 REQUIREMENTS

The guidelines developed by the SDRWQCB for the Sediment Monitoring Program specify that "annual collection and analysis of surficial sediment samples" will be accomplished at specifically designated locations. Samples are to be collected in accordance with a detailed Sample Collection Plan which addresses all collection protocol. A new plan was submitted to the SDRWQCB in November 1997. They further declare that one of two sample collection methods will be selected and that methods shall not be changed once the selection has been made. The method of choice has been established as "collection by diver".

The specific sampling sites and the required analysis for each site are listed in **Table A**. In addition to the sites specified within the Yard there are three reference sites that must be sampled and referenced to the Yard samples. Reference site locations have been stipulated by the SDRWQCB and are also shown on **Table A**.

Analyses of collected samples are to be performed by a laboratory certified by the California Department of Health Services. All records pertaining to collection or analyses of samples are to be retained for five years beyond the date of analysis. All samples are to be retained in a frozen state for at least 45 days after the

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ECO-M

SDRWQCB has received the analytical results.

Results are to be reported at the end of each annual sampling and are to include tables, graphs, and reference maps. Reporting is to also include trend curves and statistical analyses. If any significant increase in contaminant concentration is observed during this sampling program a report defining possible or suspected causes for any such increase, if any are known, is to be submitted. Sampling results are to be compared against historical data, the reference stations, and nearby storm drains. Paint chip and grain size analyses are also required.

TABLE A

SOUTHWEST MARINE SAMPLING LOCATIONS AND REQUIRED ANALYSES

STATION ID	CALIFORNIA COORDINATES		REQUIRED ANALYSES		
	EASTING	NORTHING	INDICATORS ONLY	FULL ANALYSIS	PAINT CHIPS
SWM-01	1724820	192460	X		
SWM-02	1724750	192320		X	X
SWM-03	1724720	192220	X		
SWM-04	1724915	197400		X	X
SWM-05	1724975	192400	X		
SWM-06	1724960	192290		X	X

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ECO-M

SWM-07	1725000	192240	X		
SWM-08	1725060	192210	X		
SWM-09	1724925	191975	X		
SWM-10	1725100	192020	X		
SWM-11	1725160	191820	X		
SWM-12	1725460	192115	X		
SWM-13	1725475	192000	X		
SWM-14	1725380	191760	X		
SWM-15	1725385	191680	X		
SWM-STD-01	1725400	192150		X	X

REF-01	1697300	196600		X	X
REF-02	1706085	204810		X	X
REF-03	1715225	201110		X	X

2.2 METHODS

This section describes the methods used to perform the work necessary to meet the stipulated requirements.

2.2.1 SAMPLING

Upon arriving by boat and utilizing navigation and positioning information assembled and/or installed when the Sampling Plans were prepared, each sampling location was relocated to within one meter. As appropriate and feasible, a diver guide line was lowered into the water at the sampling point to assure that the diver remained within the location parameters. The diver, wearing an isolation dry suit and face mask system and also wearing surgical latex gloves to prevent contamination of samples, would enter the water, with three one liter sterilized glass jars (that were slightly opened after the diver was submerged), and take three replicate samples from the upper approximately 7 cm of sediment. The latex gloves

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to undergo cleanup procedures. Common cleanup methods are 3620: Florisil Cleanup and 3660: Sulphur Cleanup.

When extracting liquids, Method 3520 is used. A one liter aliquot of sample is extracted with methylene chloride followed by a concentration step and solvent exchange. To ensure quality and sample integrity, surrogate standards, e.g. 2,4,5,6 Tetra chloro-m-xylene (TCMX) is added at 50 ppb. Upon completion of the extraction and analysis, the extract should contain 50 ppb of TCMX. Method 3520 uses the continuous liquid-liquid extractor. The 3520 extraction takes from 16-24 hours. The sample extract goes through a concentrating step followed by a solvent exchange.

Sediments are extracted using Method 3550. Method 3550 is a sonication extraction. The apparatus used is a ultrasonic cell disrupter equipped with a sonicator horn. This method provides prolonged contact time between sample and extracting solvent. The procedure is based on the expected concentration of organics (semi-volatile and non-volatile). The low concentration method uses 30 grams of sample whereas the high concentration method uses 2 grams. Sample cleanup is done using methods 3620 and 3660. Method 3620 is a Florisil column/cartridge cleanup procedure. Florisil is widely used for cleaning up organochlorine pesticides, phthalate esters, nitrosamines, nitroaromatics, haloethers, and organophosphorus pesticides. Florisil is a magnesium silicate with acidic properties. A florisil cartridge is loaded with sample followed by elution with suitable solvents that will leave interfering compounds behind. The eluate is then concentrated in a similar fashion as to that already mentioned. Method 3660 is a sulphur cleanup procedure. When present, sulfur's solubility is similar to the organochlorine compounds; therefore causing interference. This interference is most evident in ECD and Flame Photometric Detectors (FPD). Even having performed a 3620 cleanup, sulfur removal by 3660 is a necessity.

Method 8270 is a Gas Chromatographic (GC)/Mass Spectrometric (MS) analysis for semi-volatile and non-volatile organics that utilizes a DB-5 capillary column. This allows for the quantitation of most base, neutral and acid organic compounds that are soluble in methylene chloride, specifically PAHs, chlorinated hydrocarbons and pesticides. The spectra generated result from using a quadrapole

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as the detector on the mass spectrometer. Extraction procedures are as described above and the protocol for this procedure is that described in SW-846.

TPH is analyzed using the Department of Health Services (DHS) method. The portions are separated using procedures mentioned above and analyzed with a GC equipped with a Flame Ionization Detector (FID) for medium molecular weight hydrocarbons. This method generally requires a separate extraction for each portion.

TBT analyses were accomplished using GC/FPD Stallard methodology. Samples are extracted with hexane/tropolone. Mono, di, and tributyltins can then be derivitized using a Grignard derivitization compound, pentylmagnesium bromide.

Most of the metals were analyzed using methods 3050/6010 based on Inductively Coupled Plasma (ICP) or GFAA for detection. Mercury was done using standard Method 7471, Cadmium by 3050/7131, and Arsenic by 3050/7060.

Paint chips are extracted from the sediments by wet sieving through a one millimeter mesh screen. Paint chips are then manually separated from the remaining materials. The collected paint chips are laid out on a ruled substrate and photographed. Analysis of the chips for metals and TBT is done using methods described above.

2.2.3 GRAIN SIZE ANALYSIS

Grain size analyses are performed according to the State Water Resources Control Board method published in "Chemistry, Toxicity and Benthic Community Condition in sediments of Selected Southern California Bays and Estuaries, May 1997" and are quoted here.

"Sample Splitting and Preparation

This procedure uses wet and dry sieve techniques to determine particle size of sediment samples. Methods follow those of Folk (1974). Samples were thawed and thoroughly homogenized by stirring with a spatula. Spatulas were rinsed of all adhering sediment between samples. Size of the sub-sample for analysis was determined by the sand/silt ratio of the sample. During splitting, the sand/silt ratio was estimated and an appropriate sample weight was calculated. Sub-samples were placed in clean, pre-weighed beakers. Debris was removed and any adhering

sediment was washed into the beaker.

Wet Sieve Analysis (separation of coarse and fine fraction)

Beakers were placed in a drying oven and sediments were dried at less than 55° C until completely dry (approximately three days). Beakers were removed from drying oven and allowed to equilibrate to room temperature for a least a half - hour. Each beaker and its contents were weighed to the nearest 0.01 g. This weight, minus the empty beaker weight was the total sample weight. Sediments in beakers were disaggregated using 100ml of a dispersant solution in water (such as 50g Calgon/L water) and the sample was stirred until completely mixed and all lumps disappeared. The amount and concentration of dispersant used was recorded on the data sheet for each sample. Sample beakers were placed in an ultrasonic cleaner for 15 minutes for disaggregation. Sediment dispersant slurry was poured into a 63^μ (ASTM #230, 4 phi) stainless steel or brass sieve in a large glass funnel suspended over a 1L hydrometer cylinder by a ring stand. All fine sediments were washed through the sieve with water. Fine sediments were captured in a 1L hydrometer cylinder. Coarse sediments remaining in sieve were collected and returned to the original sample beaker for quantification.

Dry Sieve Analysis (coarse fraction)

The coarse fraction was placed into a pre-weighed beaker, dried at 55-65° C, allowed to acclimate, and then weighed to 0.01g. This weight, minus the empty beaker weight, was the coarse fraction weight. The coarse fraction was poured into the top sieve of a stack of ASTM sieves having the following sizes: No 10 (2.0 mm), 18 (1.0 mm), 45 (0.354 mm), 60 (0.25 mm), 80 (0.177 mm), 120 (0.125 mm), and 170 (0.088 mm). The stack was placed on a mechanical shaker and shaken at medium intensity for 15 minutes. After shaking, each sieve was inverted onto a large piece of paper and tapped 5 times to free stuck particles. The sieve fractions were added cumulatively to a pre-tared weighing dish, and the cumulative weight after each addition determined to 0.01g. The sample was returned to its original beaker, and saved until sample computations were completed and checked for errors.

Analytical Procedures

Fractional weights and percentages for various particle size fractions were calculated. If only wet sieve analysis was used, weight of fine fraction was computed

by subtracting coarse fraction from total sample weight, and percent fine composition was calculated using fine fraction and total sample weights. If dry sieve was employed as well, fractional weights and percentages for the sieve were calculated using custom software on a Macintosh computer. Calibration factors were stored in the computer.

2.2.4 PAINT CHIPS SEPARATION METHOD

Samples collected for paint chip analyses are passed through a stack of sieves designed to separate the material into three broad size ranges, large, medium, and small. The size separation is performed to aid in the hand separation of paint chips from the other materials found in the samples.

The lid of the sieve stack provides a water spray bath to aid in the screening of the sediments by washing the fine sediments through the sieves. The stack is comprised of the following sieves: 6.7, 2.36, & .991 mm screen sizes.

The materials recovered are dried in a low temperature oven and then the size ranges are individually sorted by hand using a fluorescent lamp with an included magnifying lens. When this sorting has been completed a review of the sorted materials is undertaken with a dissecting microscope. A final decision regarding whether the materials are paint or some other material is made.

The paint chips are weighed and photographed. At this point they are sent to the laboratory to be analyzed for metals and TBT.

2.2.5 REPORTING

This document contains Tables listing the locations of all stations, the required analyses for each location, and the results of each of those analyses. In addition, copies of the original laboratory report and quality control documents are provided. Maps are provided that show each sampling location and the concentration of each chemical variable. A diskette is provided containing this document in Word Perfect format and a copy of the analyses database in QPRO format (at RWQCB request copies are also provided in EXCEL format). The

analyses database contains all necessary variables common to all sample sites, and is accompanied by an input file describing each variable.

3.0 RESULTS

The Southwest Marine facility was sampled on March 8 & April 28, 2000. Samples were collected at the sixteen designated locations. Reference stations were sampled on March 20, 2000.

3.1 CHEMICAL ANALYSIS

Values for chemical variables are provided as both dry and wet weight in accordance with SDRWQCB specifications. **Table B** provides the results in tabular form. The chemical variables plotted on the maps are dry weight figures. Attached to this document are the Laboratory Report and the Quality Control Data Report. The analytical methods utilized for each analysis are specified on these pages.

Results are provided both in **Table B** and as concentrations of each chemical variable on the attached maps of the Yard (**Appendix A**). One map is provided for each variable or for each related group of variables. Reference station data are

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provided in Table B, below the data from the Yard, or in the case of PAH, as Table B-8. Concentrations of each chemical variable or group of variables for the three Reference Stations are shown on one map. These maps follow those of the Yard in Appendix A. **Appendix B** provides the historical relationship between this sampling and the previous samplings. **Appendix C** contains the lab reports, analytical results, and related documents. **Appendix D** has the paint chip photos.

Paint chips collected for this report were screened from 9 liters of sediment taken from each of the type localities designated by the RWQCB. The weight of the paint chips recovered are listed below by type locality.

SWM - PC 0.05 g SWM - STD - PC 0.49 g REF - 0.00 g

TABLE B: DISCHARGE MONITORING REPORT FORM

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TABLE B-1 INDICATORS ANALYSIS:	ARSENIC, CADMIUM, and CHROMIUM
TABLE B-2 INDICATORS ANALYSIS:	COPPER, LEAD, and MERCURY
TABLE B-3 INDICATORS ANALYSIS:	NICKEL, SILVER and ZINC
TABLE B-4 INDICATORS ANALYSIS:	TRIBUTYLTIN (TBT)
TABLE B-5 FULL ANALYSIS:	TOTAL PETROLEUM HYDROCARBONS
TABLE B-6 FULL ANALYSIS:	POLYCHLORINATED BIPHENYLS TERPHENYLS
TABLE B-7 FULL ANALYSIS:	POLYNUCLEAR AROMATIC HYDROCARBONS
TABLE B-8 FULL ANALYSIS:	REFERENCE LOCATIONS, POLY NUCLEAR AROMATIC HYDROCARBONS

3.2 DISCUSSION

The larger than normal paint chip weight reported during this sampling period comes from the inclusion in the samples one large paint chip weighing 1.02 grams. This paint chip appeared to have been on the sea floor for a considerable period of time. The paint chips recovered in addition to this chip weighted 0.22 grams.

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All sampling, analytical, and reporting activities proceeded normally, no unusual conditions or circumstances were noted.

3.3 PERMANENT NOTES

Beginning with this report, graphical representation of the Reference station data in **Table B** (Historical Trends Graphs) will be provided on a separate page for each chemical variable. This has been done to improve readability of the graphic representations.

In the data base established for this program all STD and other specially designated stations will be denoted in the following order; Yard designator: special designator: location number. This is in variance to the original designations established for these sites by the SDRWQCB but has been done in order to establish uniform location designations so that data in the data base can be readily manipulated in the future. All such locations have been listed in the tables in this format.

Because of the direct relationship between dry weight and wet weight values (Dry weight values are calculated from wet weight results using the formula: $\text{dry weight} = (\text{wet weight} / \% \text{ total solids}) \times 100$), with SDRWQCB authorization only dry weights are now presented in the historical tables and graphs. This has been done to make the reports more understandable, less bulky, and to remove redundancy.

3.4 RECOMMENDATIONS

There are no recommendations to be made at this time.

INTERNAL MEMORANDUM

TO: DTB/RS/BWP/DSJ
FROM: CLS

DATE: 4/29/91

SUBJECT: APPARENT VIOLATIONS OF SOUTHWEST MARINE'S NPDES PERMIT

While at Chevron's Tank Farm, located adjacent to Southwest Marine, sand blasting dust was observed on the ground at Chevron. The dust from sand blasting operations at Southwest is continually observed coming over the fence. A "haze" over the sand blasting area was obvious. When Chevron initiates stormwater sampling, it is most likely that analytical results will show high concentrations of metals and TBT unless the ground at Chevron is frequently swept.

Southwest is causing a nuisance at Chevron and discharging sand blast dust to San Diego Bay through Chevron's storm drain system. If Southwest can't control their sand blast dust, maybe they should be required to sweep Chevron's property after each sand blasting operation.

Chevron has a three-stage clarifier for runoff. It might be interesting to sample the clarifier sediments for metals and TBT. The TBT could be directly attributable to Southwest Marine's operations.

file: Southwest Marine 03-137.01
Chevron, San Diego Marine Terminal 10-245.01

5/14/91
DTB
fyi
BWP

HW - Hoop in
minors
CAC order.

DS

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	Barker

RWQB-SWM 0004607

SAR169862

**Report of Waste Discharge
Sediment Remediation Project
Southwest Marine Shipyard
San Diego, California**

Prepared for
Southwest Marine
Foot of Sampson Street
P.O. Box 13308
San Diego, CA 92113

November 19, 1998

OGDEN ENVIRONMENTAL AND ENERGY SERVICES

03-0137.06
~~03-0137.06~~

jimteno.com	EXHIBIT NO. _____
	1247
	Barker

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2.0	METHODS AND FIELD ACTIVITIES	2
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2.2	Surficial Samples	2
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3.0	SAMPLING RESULTS	5
3.1	Positioning	5
3.2	Field Collection	5
3.3	Chemistry Results	5
4.0	DISCUSSION	6
4.1	Metals	6
4.2	PCBs	6
5.0	DELINEATION OF REMEDIATION AREAS	7
5.1	Inner Leasehold	7
5.2	Outer Leasehold	8
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7.0	REFERENCES	11

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B	Tables
C	Location of Dewatering Facility
D	Environmental Compliance Documents
E	RWQCB Correspondence

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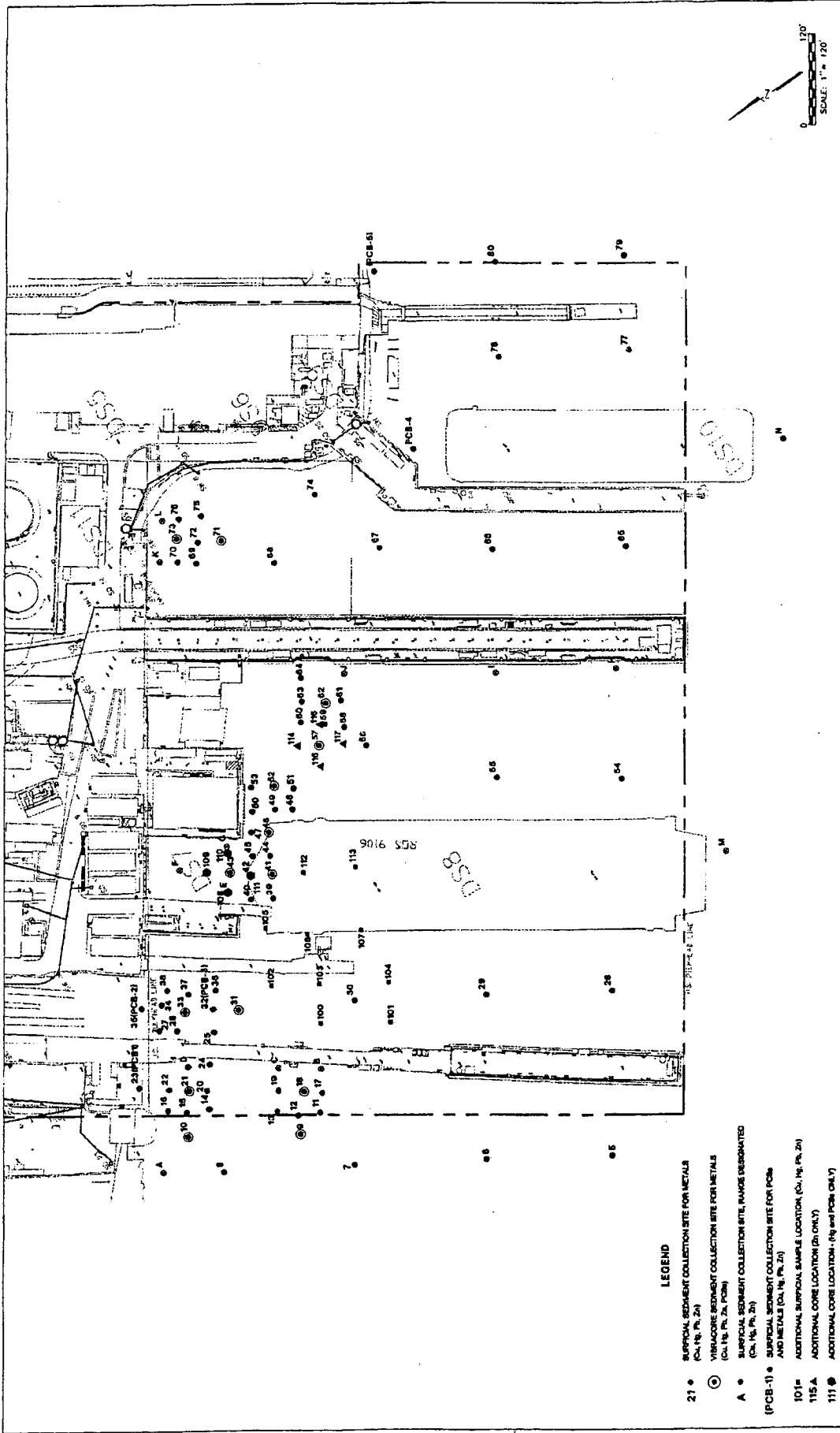
(see Appendix A)

<u>NUMBER</u>	<u>TITLE</u>
1	Regional Location of Project Site
2	Aerial Photograph of the Southwest Marine Shipyard
3	Proposed Sampling Locations from the Sampling and Analysis Plan, Southwest Marine Shipyard
4	Actual Sampling Locations, including Additional Sampling Locations, Southwest Marine Shipyard
5	Southwest Marine Sample Locations with Sediment Copper Levels Exceeding the AET Concentration (810 mg/kg)
6	Southwest Marine Sample Locations with Sediment Lead Levels Exceeding the AET Concentration (231 mg/kg)
7	Southwest Marine Sample Locations with Sediment Mercury Levels Exceeding the AET Concentration (4.2 mg/kg)
8	Southwest Marine Sample Locations with Sediment Zinc Levels Exceeding the AET Concentration (820 mg/kg)
9	Southwest Marine Sample Locations with Surficial PCB Levels Exceeding the AET Concentration (0.95 mg/kg)
10	Stations Exceeding an AET Concentration for Cu, Pb, Hg, Zn, and/or PCBs, Southwest Marine Shipyard
11	Proposed Maximum Extent of Remediation Areas, Southwest Marine Shipyard

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<u>NUMBER</u>	<u>TITLE</u>
1	Position Data, Including Diver Field Log Information
2	SWM Core Log Information and DGPS Vibracore Locations
3	Sediment Copper Concentrations in the SWM Leasehold
4	Sediment Lead Concentrations in the SWM Leasehold
5	Sediment Mercury Concentrations in the SWM Leasehold
6	Sediment Zinc Concentrations in the SWM Leasehold
7	Sediment PCBs Concentrations in the SWM Leasehold



LEGEND

- 21 • SURFICIAL SEDIMENT COLLECTION SITE FOR METALS (C/L, H, P/L, Z/L)
- 21A • VIBROCORE SEDIMENT COLLECTION SITE FOR METALS (C/L, H, P/L, Z/L, P/M)
- A • SURFICIAL SEDIMENT COLLECTION SITE, INWIDE DESIGNATED (C/L, H, P/L, Z/L)
- (PCB-1) • SURFICIAL SEDIMENT COLLECTION SITE FOR PCBs AND METALS (C/L, H, P/L, Z/L)
- 101# • ADDITIONAL SURFICIAL SAMPLE LOCATION (C/L, H, P/L, Z/L)
- 115A • ADDITIONAL CORE LOCATION (Z/L ONLY)
- 111 • ADDITIONAL CORE LOCATION - (H and PCBs ONLY)

FIGURE 4

**Actual Sampling Stations, Including Additional Sampling Locations
Southwest Marine Shipyard**



**SOUTHWEST MARINE, INC. TECHNICAL REPORT
SECTION F.1(a-c)**

**In Accordance with Order No. 97-36
NPDES Permit No. CAG039001**

November 17, 1998

jmsteno.com	EXHIBIT NO. _____
	1248
	Barber

SAR014971

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GENERAL INFORMATION

Facility Location:

Southwest Marine, Inc.
Foot of Sampson St.
P.O. Box 13308
San Diego, CA 92170
(619) 238-1000 X2045

Mailing Address:

Southwest Marine, Inc.
Foot of Sampson St.
P.O. Box 13308
San Diego, CA 92170

Owner/Operator:

Southwest Marine, Inc.
Foot of Sampson St.
P.O. Box 13308
San Diego, CA 92170

Facility Contact:

Sandor Halvax

SIC: 3731

EPA ID #: CAD981172554

State Generator ID #: HAEF36019852

Receiving Water: San Diego Bay

FACILITY DESCRIPTION

The Southwest Marine, Inc. (SWM) facility covers approximately 10.39 acres of land and 16.64 acres of water on the eastern waterfront of central San Diego Bay, at the Foot of Sampson Street in the city of San Diego. Existing environmental permits include; Air Pollution Control District (APCD) permits to operate and registrations, Industrial User Discharge Permit issued by the City of San Diego Metropolitan Wastewater Department, and NPDES Permit No. CAG039001.

The San Diego Unified Port District is the lessor to SWM. Improvements to the water area include five piers ranging in length from 257 feet to 700 feet and two floating drydocks. The AFDL drydock (4,000 tons lifting capacity) is of concrete construction and located on the south side of pier 4. The Pride of San Diego (POSD) drydock (22,000 tons lifting capacity) is located south of pier 2. Adjacent to the POSD drydock is an enclosed barge used for abrasive blasting and painting of anchor chain.

SWM also manages a solid waste reclamation and recycling area located at the foot of the gantry crane tracks adjacent to Belt Street. This area segregates, consolidates, reclaims, recycles and disposes of shipyard generated municipal solid waste which includes; metals, wood, paper/cardboard, and general refuse. Lastly, SWM operates a hazardous waste reclamation facility which is located just south of the paint and sandblast area. Typical wastes managed in this compound include; spent abrasive, paint wastes, waste oil, oil contaminated debris, and miscellaneous chemicals. Over 4,000 linear feet of berm exists throughout the perimeter of the facility as well other strategic locations to ensure storm water is discharged through designated conveyance systems. A storm water diversion system also exists throughout the facility which recovers 100% of storm water from the hazardous waste storage area, the solid waste reclamation area, the POSD wharf and other selected areas.

Piers and Wharfs - These facilities exist to moor and support berthed vessels that are undergoing repair operations, as well as, berthing barges used to house vessel crews while ship repairs are being conducted. The facility includes a 40 foot by 637 foot repair pier (Pier 1), a 30 foot by 257 foot service pier (Pier 2), one 30 foot by 475 foot pier (Pier 4), a 30 foot by 350 foot berthing pier (Pier 5). Pier 1 is of concrete construction with a timber approach, Piers 2 and 5 are of timber (wood) construction, and Piers 3 and 4 are constructed of concrete. Wastes staged and transported across piers include spent abrasive, paint, petroleum products, sanitary waste and general refuse.

Drydocks - The drydocks are used to conduct repair and maintenance activity which cannot normally be conducted while the vessel is waterborne. These activities generally include exterior hull repair, preservation (abrasive blasting and/or hydroblasting and painting), and repair/replacement of valves and fittings below the waterline. Ship launching and recovery is accomplished by means of integral ballast tanks on drydocks which take in and discharge seawater. Wastes generated during ship repair include spent abrasives, paint, rust, petroleum products, marine growth and general refuse. Both drydocks at SWM are contained to prevent storm water and wash water from entering the receiving water. All industrial waste (including most storm water) is recovered to holding tanks for subsequent disposal to the Metropolitan Sewage System. Only during periods of non-use shall storm water be discharged to San Diego Bay from the drydocks.

On-shore facilities include a painting and abrasive blasting area located at the foot of Pier 3, and a paint booth located on the southeast section of the facility. On the north end of the facility is a transportation equipment maintenance area. Steam cleaning/pressure washing of vehicles and equipment is included in this area. This area includes a sump where effluents are collected and drained to a three-stage clarifier which is connected to the Metropolitan Sewage System.

STORM WATER DIVERSION SYSTEM

Lastly, SWM operates and maintains a Storm Water Diversion System ("SWDS"). SWM developed this SWDS to eliminate and reduce the concentration of pollutants discharged to receiving waters (San Diego Bay) through its storm water conveyance system. This system consists of 30 catch basins (drains) and associated piping as well as secondary containment from various hazardous materials areas. The diversion system is designed to capture the first 0.25 inch of storm water that has fallen upon the facility. Rain gages are utilized to determine when 0.25 inch of rainfall has been achieved.

Following the first 0.25 inch of storm water recovery to the SWDS, remaining storm water may be redirected to San Diego Bay through (7) outfalls enumerated SW1 through SW8. Surface runoff from non point source discharges is provided for by use of the City of San Diego's existing 54-inch diameter concrete municipal storm drain line, which angles diagonally across SWM from the Sampson Street entrance to an outfall south of the base of Pier 3. This storm drain outfall is designated as Outfall SW4. Storm drains linked to SW4 include SD10, SD19, and SD26 which may be diverted to SW4 when storm water in excess of 0.25 inch is captured.

Storm water recovered from the SWDS is held in eleven tank systems DS1 through DS11, and is managed in accordance with SWM's Industrial User Discharge (IUD) Permit. DS-4 and DS-7 through DS11 capture 100% of storm water within their respective areas and are described below:

- DS4-Solid Waste Reclamation Area
- DS7-POSD wharf and ramp
- DS8-POSD Drydock (During Industrial Activity)
- DS9-Electric Shop Sump
- DS10-AFDL Drydock (During Industrial Activity)
- DS11-Hazardous Waste Reclamation Area

Once captured storm water is determined to meet IUD permit parameters, it is discharged to sewer.

Storm Water Outfalls (Latitude 32-26-15, Longitude 117-08-45):

1. Outfall SW1 - North quaywall by Transportation Department
2. Outfall SW2 - Northeast head of Pier 1
3. Outfall SW3 - Entrance to Pier 2 on North side
4. Outfall SW4 - (Municipal discharge) - South Quaywall foot of Pier 3
5. Outfall SW5 - Quaywall, South of Pier 3

6. Outfall SW6 - Eliminated 9-17-98
7. Outfall SW7 - Southeast Head of Pier 4
8. Outfall SW8 - Located in middle of Quaywall between Pier 1 and Pier 2
9. Storm Drain SD10 - Located west of Diversion System 3 in middle of roadway
10. Storm Drain SD19 - Located East of Diversion System 3 in material staging area
11. Storm Drain SD26 - Located East of the Outdoor Paint Area in roadway

Note:

SD10, SD19, and SD26 are connected to the municipal storm system prior to its discharge at SW4.

DISCHARGES

The following discharges at SWM are described in the 1988 NPDES permit application and subsequent documentation, numerous submittals, and amendments submitted pursuant to Regional Board information requests during the NPDES permit renewal process. These discharges are intermittent and the volumes given are during periods of actual discharge. No chemical additives are used in any industrial process wastewater or discharge.

Industrial Discharges (ID) to San Diego Bay (Latitude 32-26-15, Longitude 117-08-45):

Fire Protection Water – Fire protection systems pump water from San Diego Bay through a series of pipes to vessels moored at berths and piers. Fire protection water is discharged back to San Diego Bay after a single pass through the system.

1. Outfall ID1-Fire pumps at Pier 1-250 gpm
2. Outfall ID2-Fire pumps at Pier 3-250 gpm
3. Outfall ID3-Fire pumps on POSD drydock-250 gpm
4. Outfall ID4-Fire pumps on AFDL drydock-250 gpm
5. Outfall ID5-Fire hose testing at Pier 5-100 gpd
6. Outfall ID6-Portable fire pumps installed on vessels during transit to and from the shipyard-750 gpm/ea.

Floating Drydock Ballast Tank Water – A floating drydock has ballast tanks which can be filled with and emptied of water so that it can be lowered and raised to dock and launch ships. The ballast tank water is taken in from and discharged back to San Diego Bay.

7. Outfall ID7-Floating drydock ballast water (POSD) per maximum lift – 9,000,000 gallons
8. Outfall ID8-Floating drydock ballast water (AFDL) per maximum lift – 4,488,000 gallons
9. Outfall ID9-Floating Drydock Submergence/Emergence Water (POSD) –5,112 gallons/evolution
10. Outfall ID10-Floating Drydock Submergence/Emergence Water (AFDL) – 2,266 gallons/evolution

Steam Condensate – Steam is generated in boilers at ship construction, repair, and maintenance facilities and supplied to ships. As steam is conveyed through the pipes from the boiler to the ship, fresh water condensate forms within the pipes. This condensate is collected in condensation traps in the steam pipes and is periodically discharged from the traps to San Diego

Bay. There is no contact with wastes or pollutants, other than heat, ordinarily a result of such processes.

11. Outfall ID11-Miscellaneous, Low Volume Water – Emergency showers, portable air conditioning condensate, distilling unit cooling water, and fresh water backflow preventer
12. Outfall ID12-Heat exchanger from water cooled air compressor (building 13) – 300 gpm
13. Outfall ID13-Cooling water from diesel generators and fire pumps on the POSD drydock-500gpm
14. Outfall ID14-Cooling water from diesel generators and fire pumps on the AFDL drydock-250gpm

Not Discharged to San Diego Bay:

The following wastes streams are managed in accordance with SWM's IUD Permit and are disposed of via the municipal sewerage system (POTW):

1. Pipe and tank hydrostatic test water
2. Clarified water from 3-stage clarifier
3. Sewage from ships
4. Steamcleaning water
5. Ship bilge/ballast water
6. Hydroblast water
7. First flush storm water
8. Floating drydock sump water from industrial process water or storm water that has come in contact with pollutants
9. Saltbox water

CERTIFICATION STATEMENT

Southwest Marine, Inc.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

SIGNED: *S. Halvax* DATE: 10/20/98

Sandor Halvax, Manager
Material Business Management

APPENDIX I – SITE MAPS

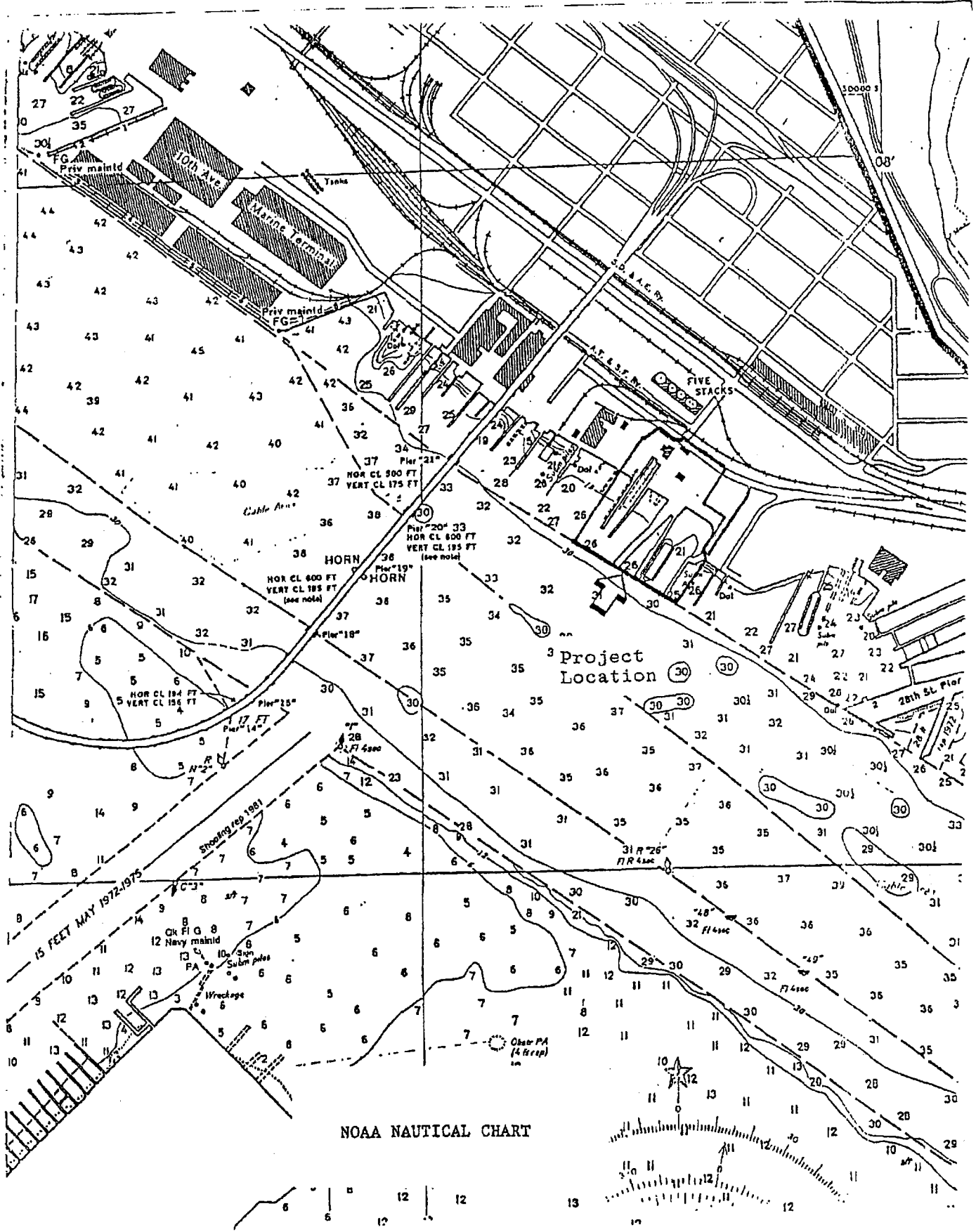
1. Vicinity Site Map
2. NOAA Nautical Chart
3. San Diego Unified Port District Property Plat
4. Facility Site Map
5. Storm Water Diversion System Map

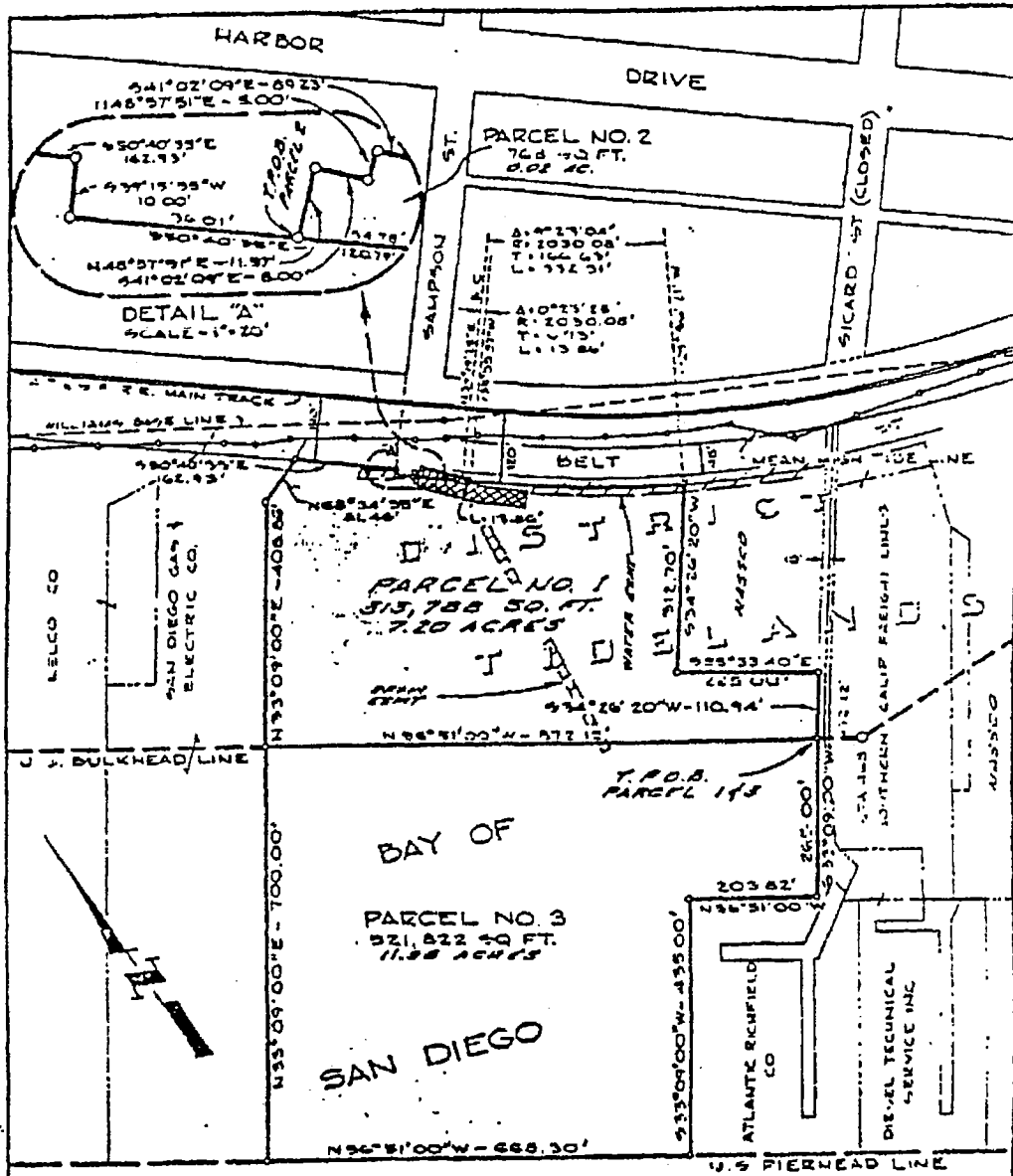
APPENDIX II - EXISTING ENVIRONMENTAL PERMITS

1. San Diego Air Pollution Control District - Permits to Operate/Registrations
2. San Diego Municipal Industrial Waste Water Program - Industrial User Discharge Permit



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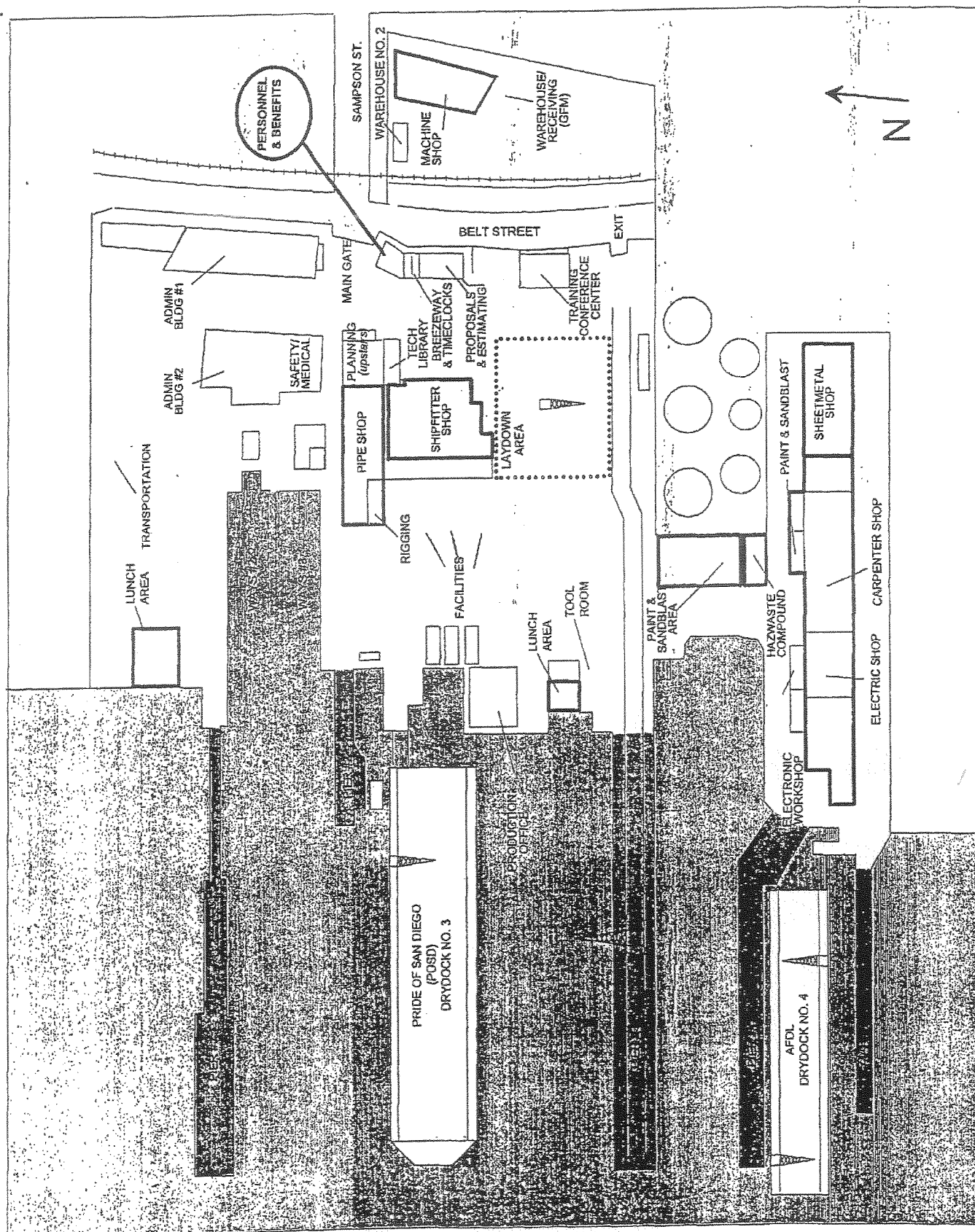


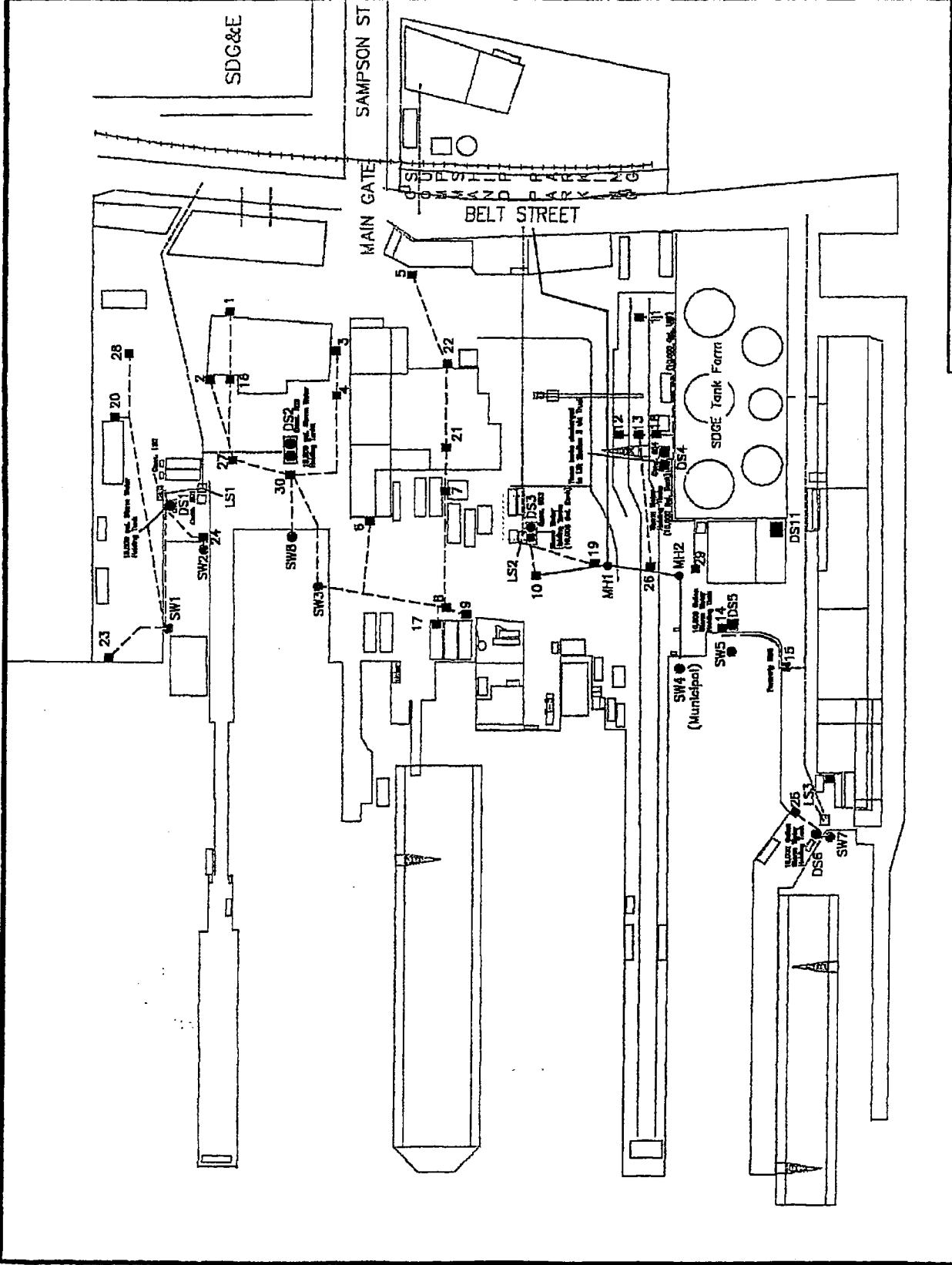
NOTES - State Lands
 LEASE AREAS SHOWN SHADED.
 BLDG. AREA SHOWN CROSS-HATCHED.
 CITY OF SAN DIEGO EASEMENTS SHOWN HATCHED.
 BASIS OF BEARINGS IS "OLD TOWN".

FROM 1214-B, 29 JULY 1972, BY P.O.B., APPROVED BY CHIEF ENGINEER
 FROM 1214-B, 29 JUNE 1972, BY P.O.B., APPROVED BY CHIEF ENGINEER
 REVISED FROM 593-B

DRAWN: AVOTTE CHECKED: [Signature] REVIEWED: [Signature]	SAN DIEGO UNIFIED PORT DISTRICT TIDELAND LEASE WITHIN CORPORATE LIMITS OF SAN DIEGO	DATE: 4 NOV. 1980 SCALE: 1" = 200' REF: 2087-B
APPROVED: [Signature] CHIEF ENGINEER	SOUTHWEST MARINE, INC. 2087-B	

SAN DIEGO UNIFIED
 PORT DISTRICT
 PROPERTY PLAT





SOUTHWEST MARINE, INC.
 11/1/88
 #P722650_1108.dwg

- DS = DIVERSION SYSTEM
- LS = SEWAGE LIFT STATION
- SW = STORM WATER OUTFALL
- SANITARY DISCHARGE
- - - DIVERSION LINE
- STORM DRAIN (SD)

APPENDIX II – EXISTING ENVIRONMENTAL PERMITS

1. San Diego Air Pollution Control District - Permits to Operate/Registrations
2. San Diego Municipal Industrial Waste Water Program - Industrial User Discharge Permit

Southwest Marine Permitted / Registered Equipment

<i>Permitted/Reg. Equip.</i>	
Equipment Type	Reg/PO#
Welding Machine (R)	962010
Gasoline Service Site (P)	870676
Cold Solvent Dip Tank-Prts Washer (P)	950309
Vacuum Loader (P)	930292
Abrasive Blast Machine (P)	6484
Marine Coating Operations (P)	6646
Abrasive Blast Machine (P)	7409
Abrasive Storage Tank/Handling System (P)	20208
Abrasive Blast Machine (P)	30427
Marine Parts Coating (P)	30718
Abrasive Blast Machine (P)	850630
Abrasive Blast Machine (P)	850735
Abrasive Storage Hopper/Dust Collector (P)	860182
Abrasive Storage Hopper/Dust Collector (P)	890175
Abrasive Blast Berge-Dust Collector (P)	901074
Abrasive Blast Machine (P)	910203
Abrasive Blast Room&Handling Sytem (P)	930298
Cold Solvent Dip Tank-Prts Washer (P)	950308
Elec.Varnish Dip Tank/Bake Oven (P)	850640
#1 Generator (R)	962001
#3 Generator (R)	961999

Southwest Marine Permitted / Registered Equipment

<i>Permitted/Reg. Equip.</i>	
Equipment Type	Reg/PO#
#1 POSD Generator (P)	30064
#2 POSD Generator (P)	30067
Boiler (P)	961998
Boiler (P)	30061
Boiler (P)	870150
Remote Reservoir Cleaner-Prts Washer (P)	960427
Remote Reservoir Cleaner-Prts Washer (P)	961986
Fiberglass/Polyster Layup (P)	900222
Fiberglass Machining Facility-Port. (P)	900223
Solvent Recovery Still (P)	930442
Emissions Fee Per Rule 40(r)	N/A
AB2588 Air Toxics Fee	N/A
Mounted Shore Crane (P)	A/C 971495
Diesel Crane (P)	962075
Heavy Lift Barge-Crane (R)	962007
Heavy Lift Barge-Winch (R)	962006
Starboard Crane (R)	962004
Port Crane (R)	962005

INDUSTRIAL USER DISCHARGE PERMIT

Permit Number: 11-0217 -01A
Permit Category: Two
Expiration Date: September 1, 2001

Issued to Permittee: Southwest Marine, Inc.
P.O. Box 13308
San Diego, CA 92170-3308

Attention: Sandor Halvax

For the Facility: Foot of Sampson Street
San Diego, CA

Pursuant to Federal, State, and local regulations, the permittee is hereby authorized to discharge an annual average of **12,717 gallons per calendar day of industrial wastewater into the Metropolitan Sewer System** from this facility.

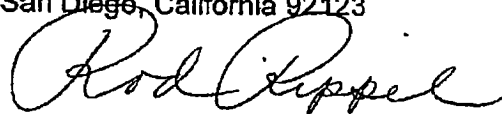
The discharge is subject to conditions set forth in the following pages of this permit. Failure on the part of the industrial user to fulfill any of the specified conditions shall be sufficient cause for immediate revocation of this permit. Any assignment or transfer of this permit shall automatically make it void.

This permit may be modified by the Metropolitan Industrial Waste Program, as required or authorized by City codes, or as required by the Federal Government or agencies thereof. This permit is further subject to termination upon thirty (30) days written notice to the industrial user by an authorized representative of the Metropolitan Industrial Waste Program.

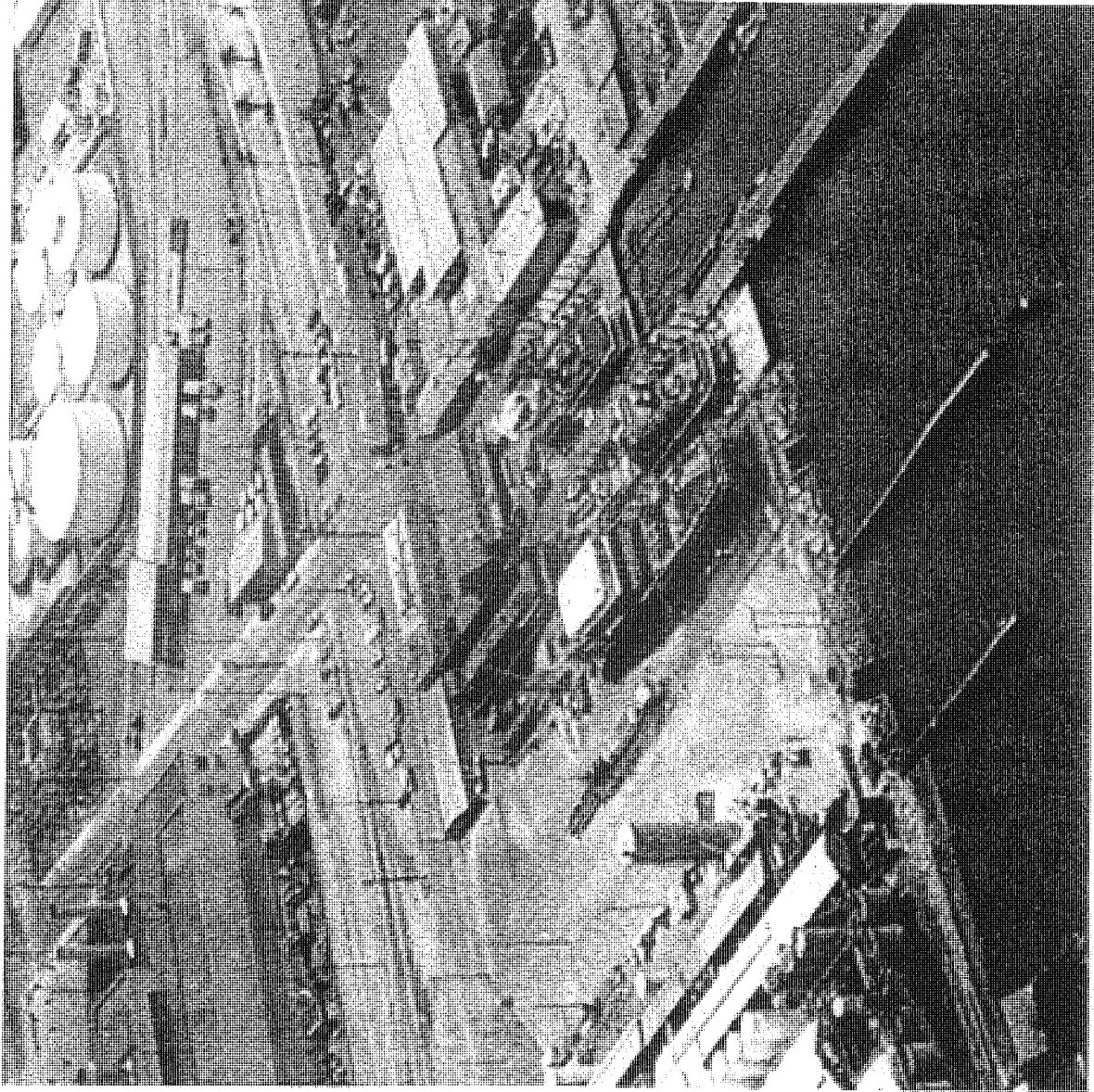
If a completed renewal application is received by the Metropolitan Industrial Waste Program a minimum of forty-five days before the expiration date, this permit will remain in force until a new permit is issued or the permittee is notified of nonrenewal.

Issued on: *OCTOBER 30, 1997*

By: METROPOLITAN INDUSTRIAL
WASTE PROGRAM
9192 Topaz Way
San Diego, California 92123



Rod Rippel, Program Manager

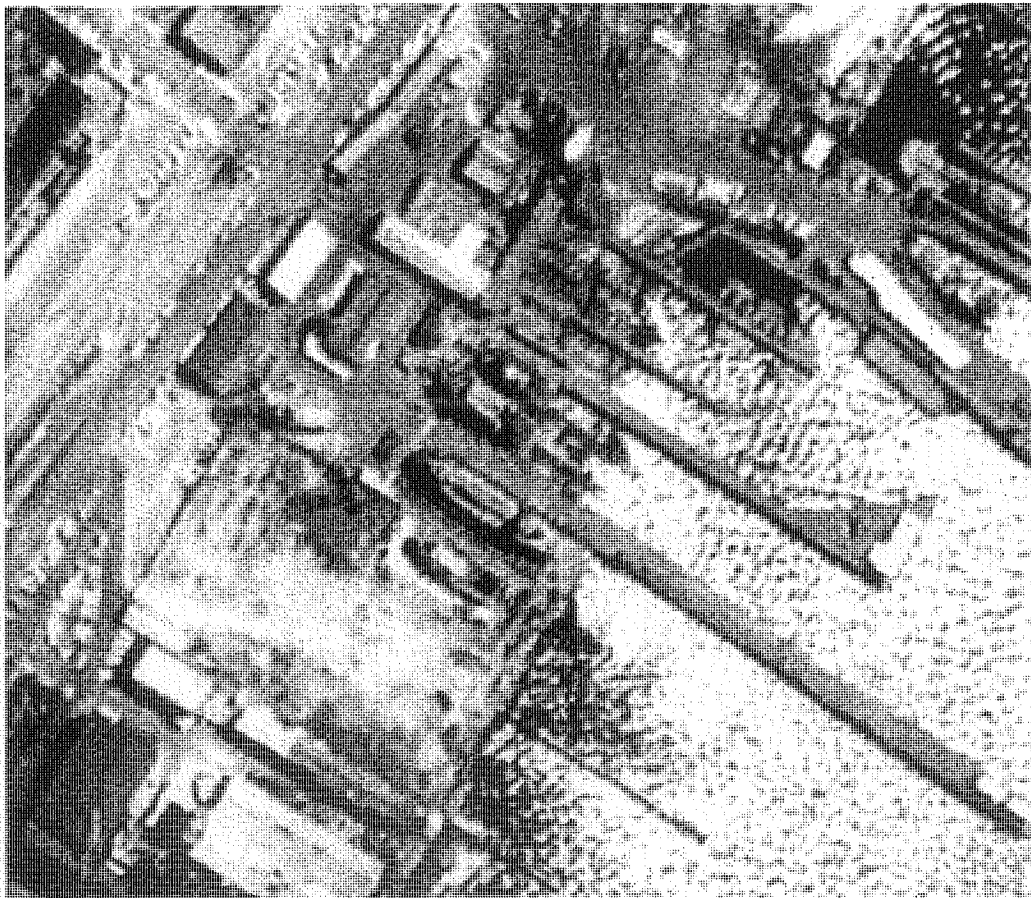


insteno.com EXHIBIT NO. _____
1249
Barker

Note: Detail of previous photo.

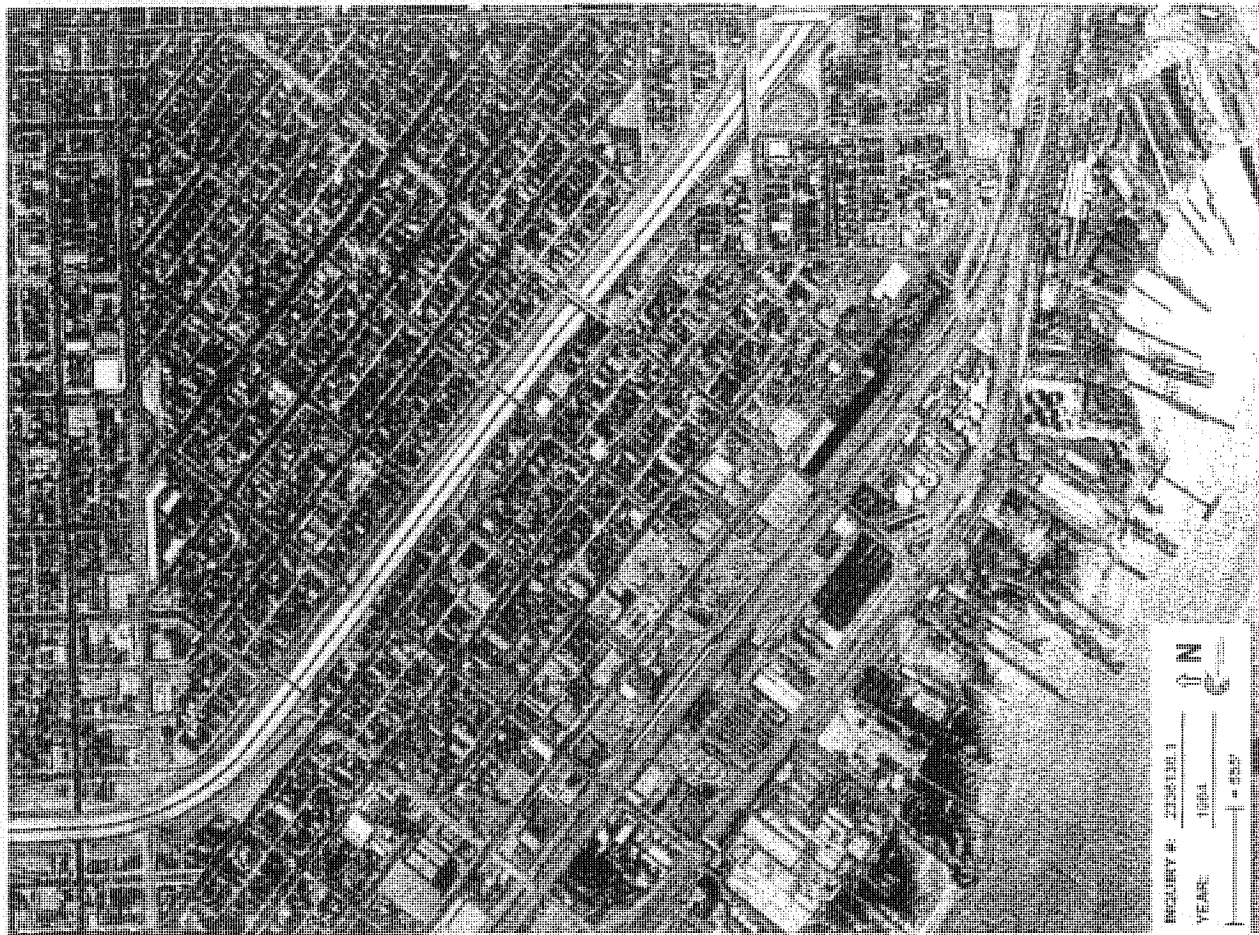
Date: 1970-1973

Source: San Diego Historical Society.



Note: Detail of photo at left.

jrwilkins.com	EXHIBIT NO. _____
	1250
	Barber



Date: 1964
Source: Environmental Data Resources, Inc.

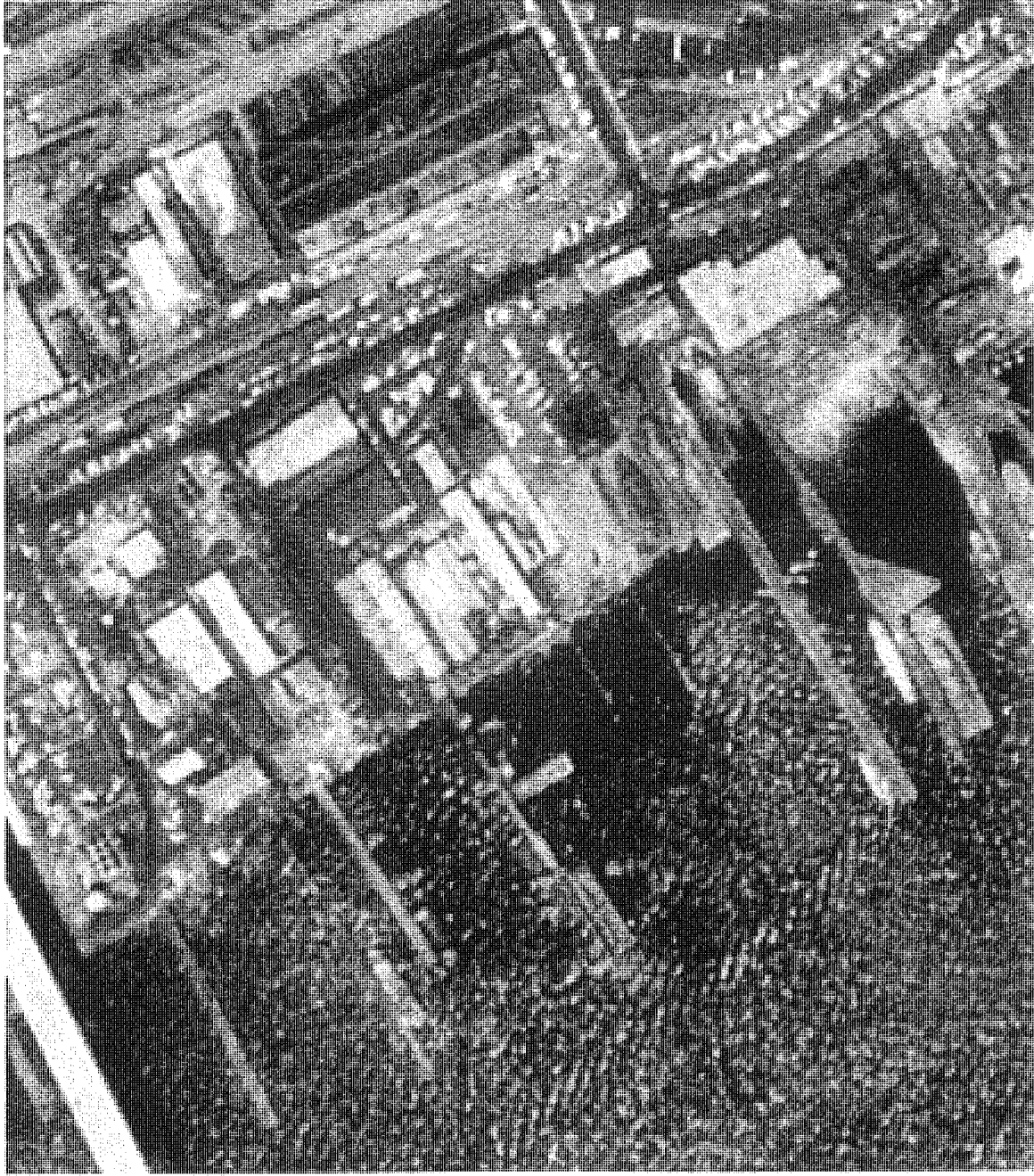
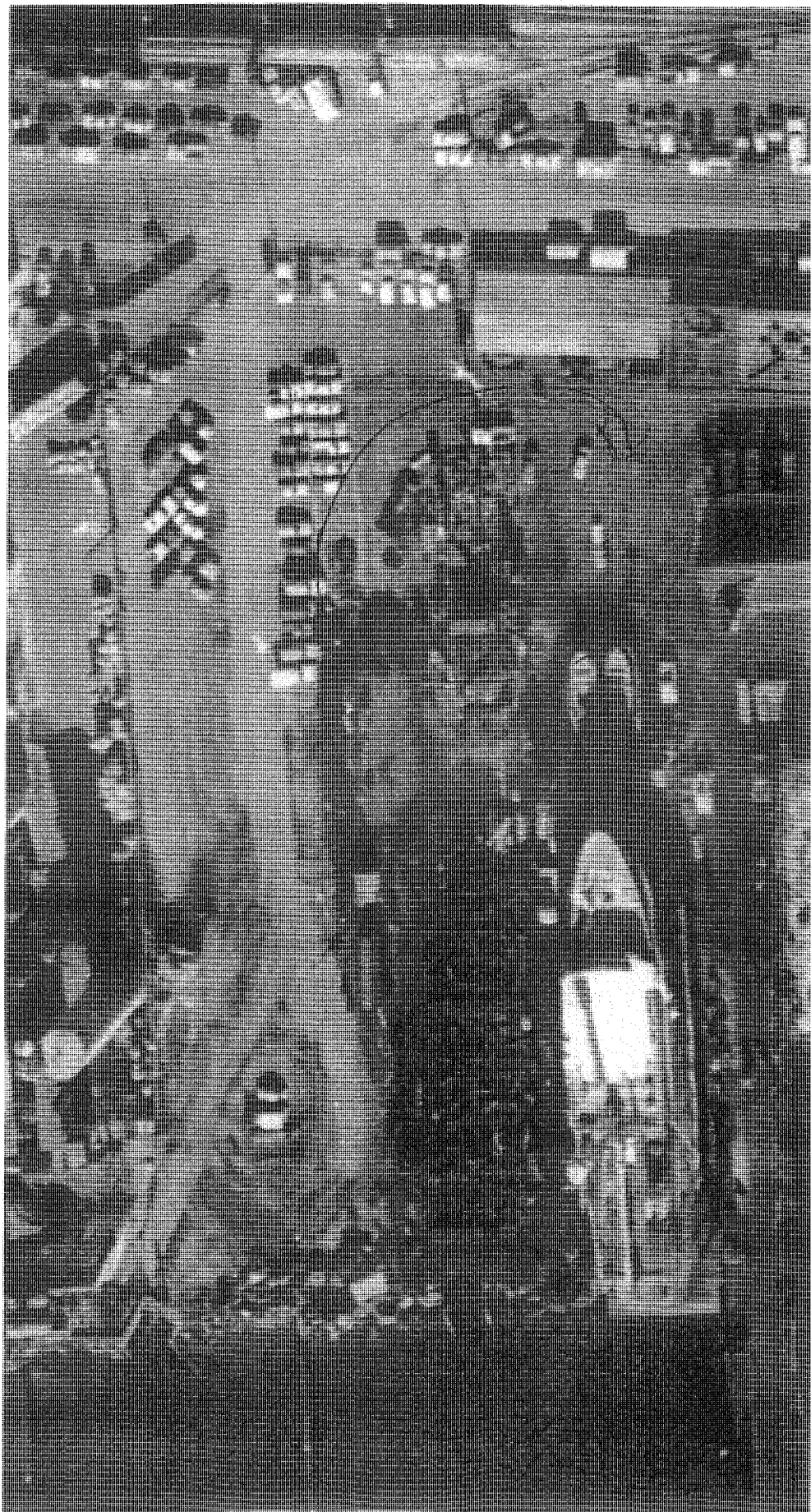


EXHIBIT NO. _____
1251
Barker

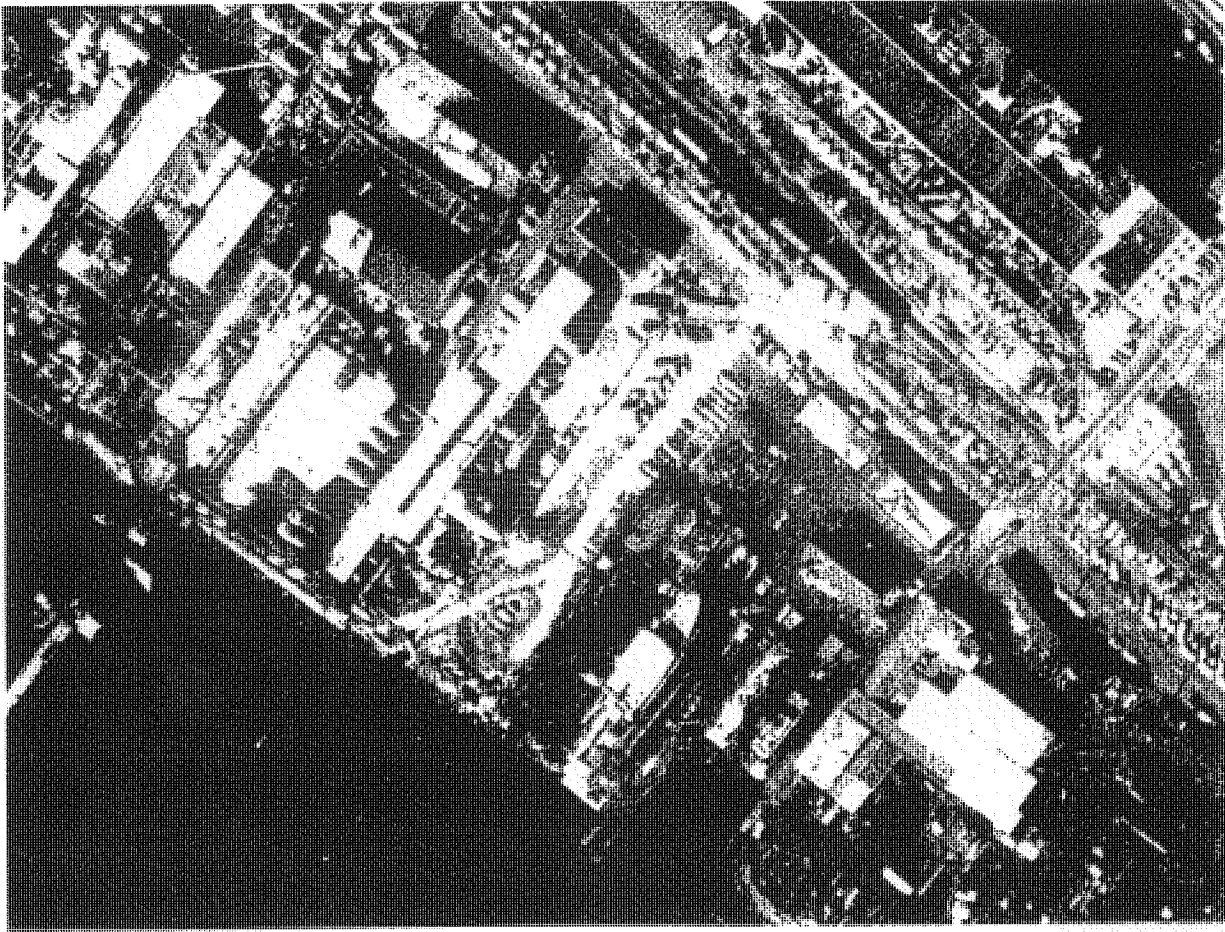
Note: Detail of previous photo.

Date: 1969.
Source: University of California Santa Barbara.



jmsfoto.com **EXHIBIT NO.** _____
1252
Barter

Date: November 27, 1978
Source: Continental Aerial Photo, Inc.



jmsieno.com EXHIBIT NO. _____
1253
Barber

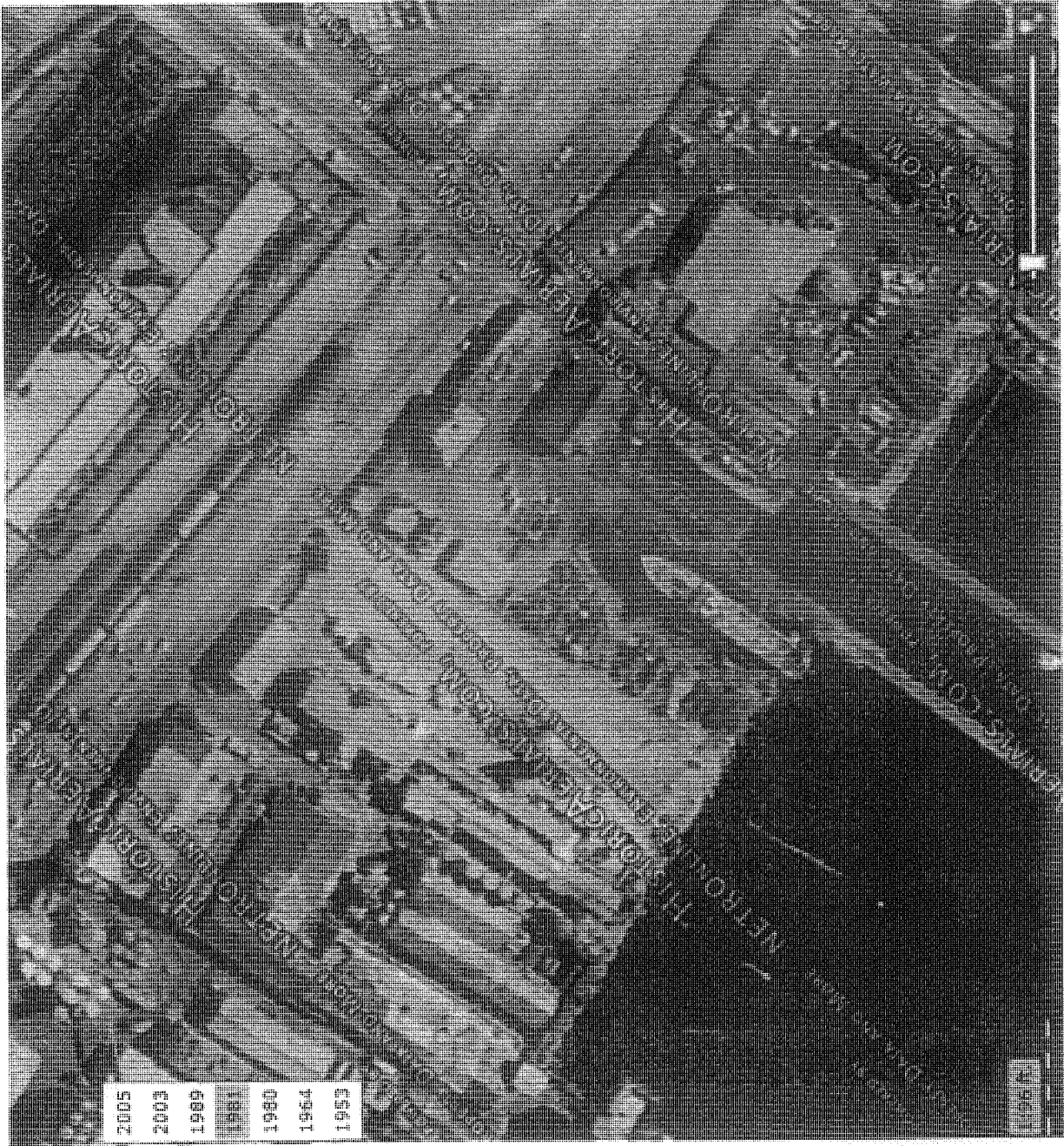
Date: 1978
Source: DPLU, as cited in ENV America. 2004. Technical Report for RWQCB Investigation, Order No. R9-2004-0026, Silver Gate Power Plant, San Diego, California.
July 14, 2004. Appendix B.



jmsteno.com EXHIBIT NO. —
1254
Barber

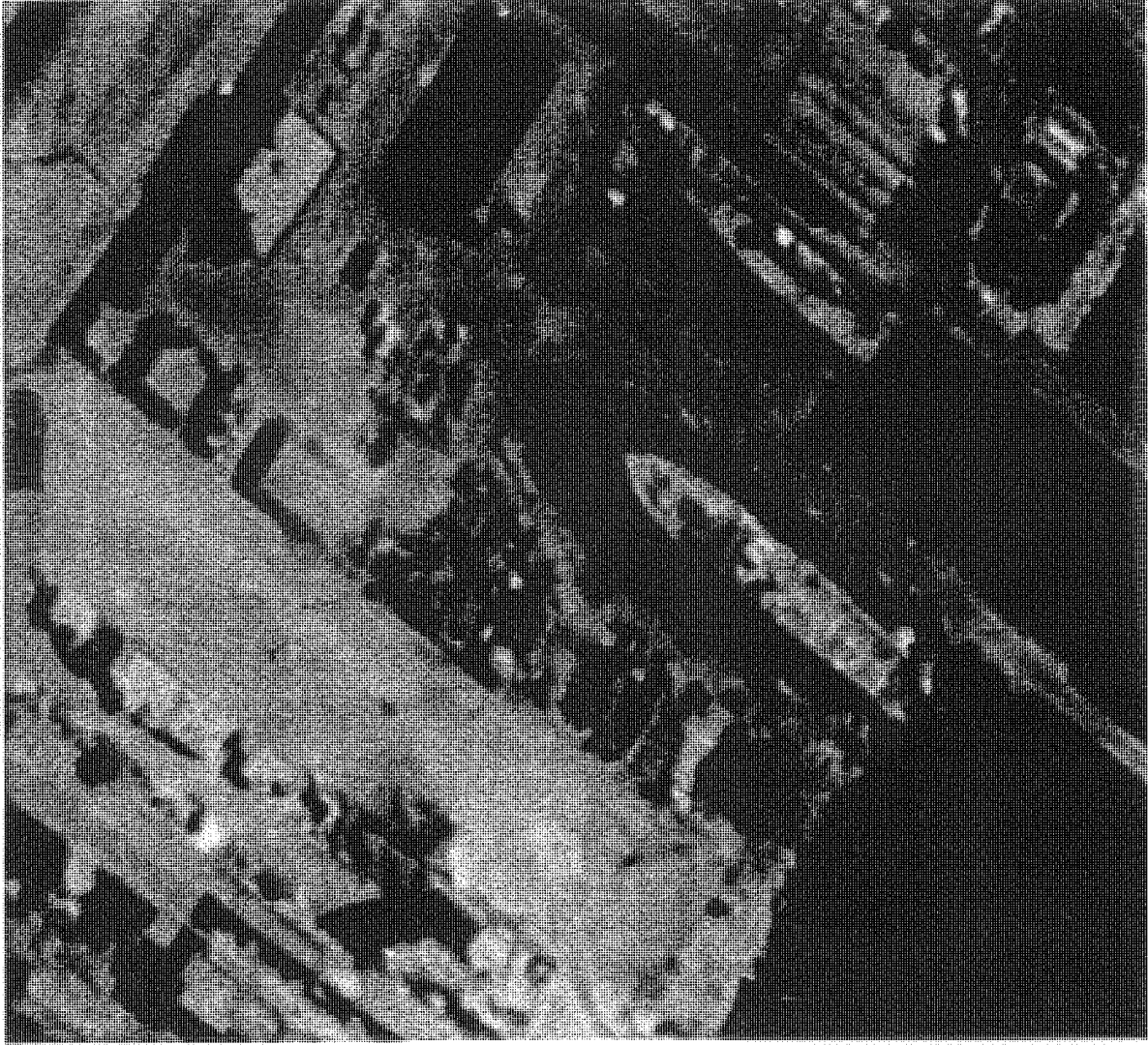
Note: Detail of previous photo.

Date: July 15, 1975
Source: University of California Santa Barbara.



historicalaerials.com EXHIBIT NO. _____
1255
Barter

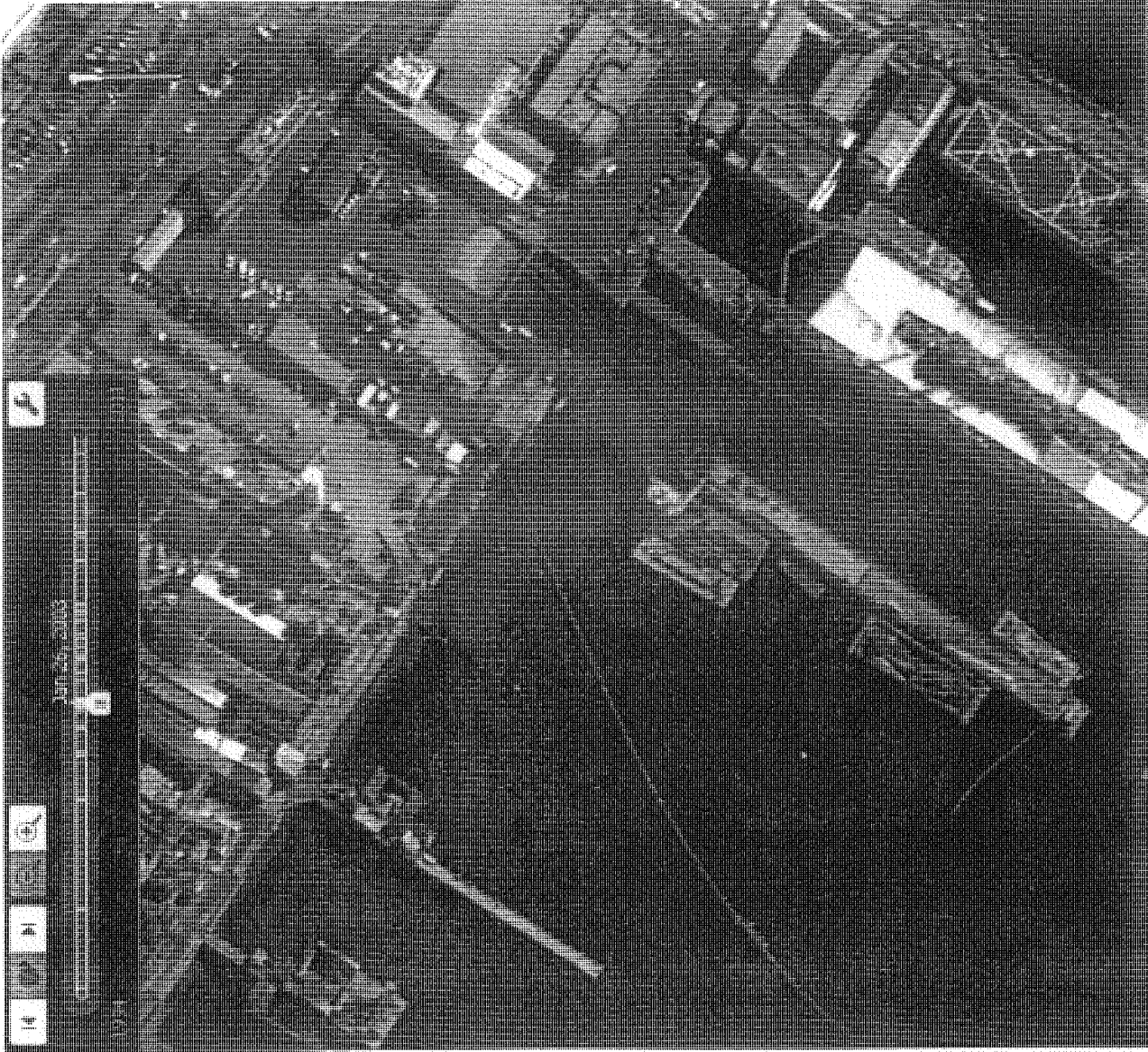
Date: 1981
Source: Historicalaerials.com



jnsfnc.com EXHIBIT NO. _____
1256
Barber

Note: Detail of previous photo.

Date: 1981
Source: Historicalaerials.com



jmslens.com EXHIBIT NO. _____
1257
Barker

Date: January 26, 2003
Source: Google Earth

From: "Ruth Kolb" <RKolb@sandiego.gov>
To: <LHonma@waterboards.ca.gov>
Date: 11/21/2005 7:35:51 AM
Subject: Re: Questions regarding catch basin near SWM

Good Morning Lisa,
SDG&E was issued a NOV. A colleague and I met with SDG&E representatives on site. SDG&E cleaned the catch basin and are in the process of trying to determine the origination of the 6-inch and 12-inch storm drains that enter the City's catch basin. R

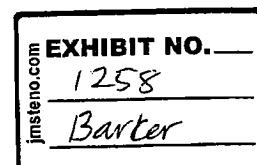
Ruth Kolb
Storm Water Program
City of San Diego
1970 B Street, MS 27A
San Diego, CA 92102
(619) 525-8636 office
(619) 525-8641 fax
rkolb@sandiego.gov

>>> "Lisa Honma" <LHonma@waterboards.ca.gov> 11/17/2005 3:42 PM >>>

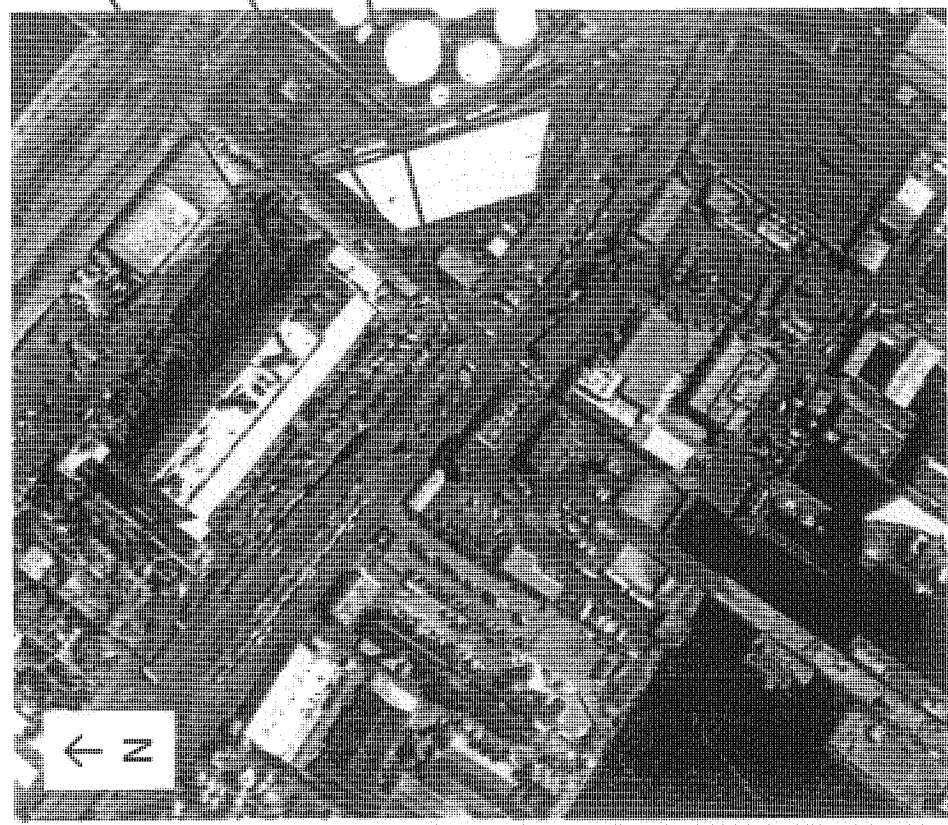
Ruth, I was just speaking with Shaun Halvax at SWM and he mentioned that the City had issued and then rescinded an NOV based on elevated sediment levels in a catch basin near their site. He said that the catch basin drained off of SDG&E. I was wondering whether you followed up with SDG&E about it and what was the result?

I'm trying to put together a record regarding SDG&E's role in the Shipyard CAO. Any information would be appreciated. Thanks a bunch. Lisa

CC: "Chris Zirkle" <CZirkle@sandiego.gov>, "Tim Miller" <MillerT@sandiego.gov>



CB-1 Location



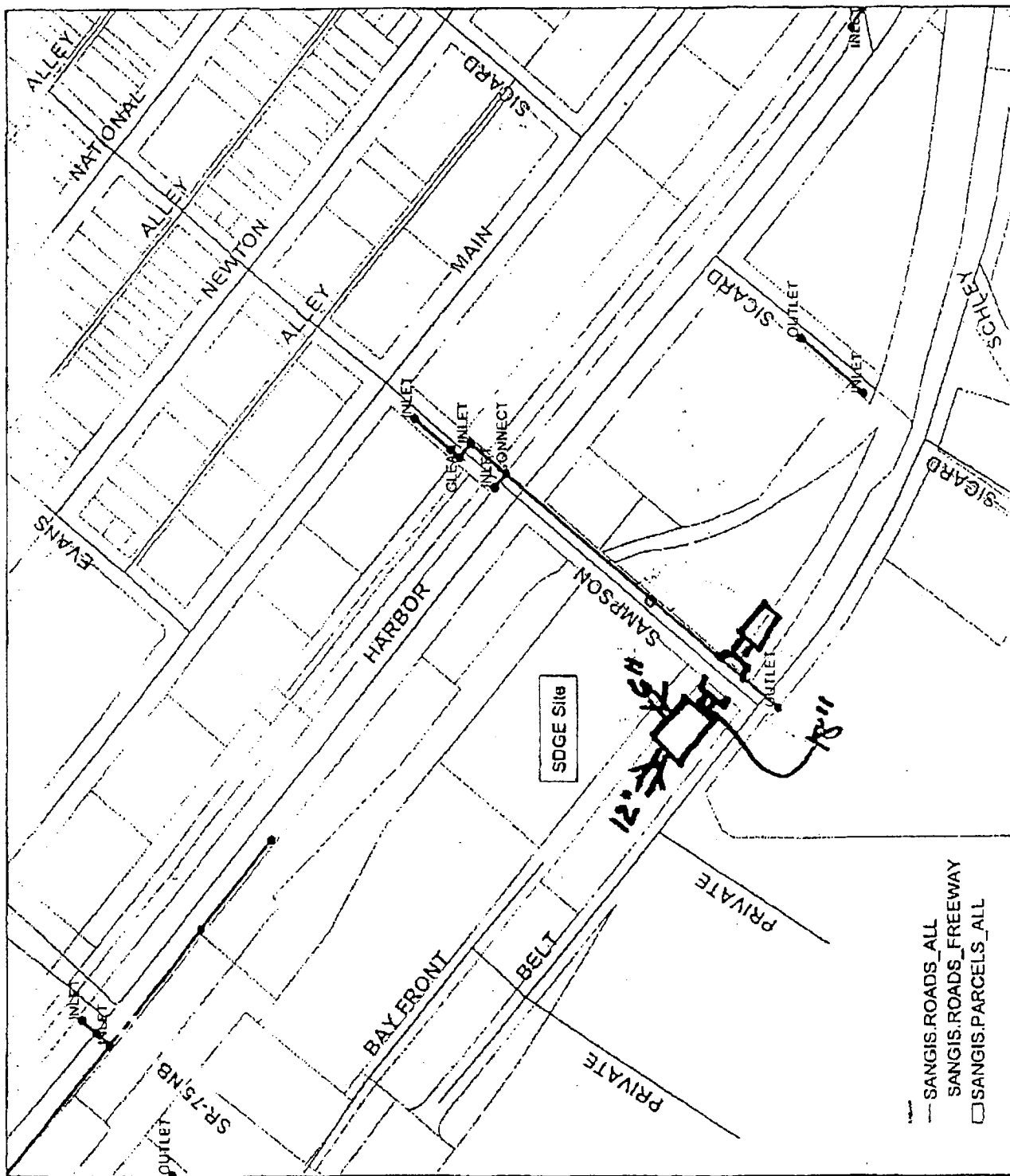
Silvergate substation

Sampson Street

CB-1

instano.com EXHIBIT NO. 1259
Barber

December 30, 2003 USGS Aerial Photo



SAR280509

insteno.com	EXHIBIT NO.
	1260
	<i>Barker</i>

**Final Report
Sediment Characterization Study
and Remediation Plan
Southwest Marine Shipyard
San Diego, California**

Prepared for
Southwest Marine
Foot of Sampson Street
P.O. Box 13308
San Diego, CA 92113

December 1998

OGDEN ENVIRONMENTAL AND ENERGY SERVICES

FILE
~~03-21-7-08~~

jms@steno.com	EXHIBIT NO. _____
	1261
	Barker

5510 Morehouse Drive
San Diego, California 92121

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3.0	SAMPLING RESULTS	5
3.1	Positioning	5
3.2	Field Collection	5
3.3	Chemistry Results	5
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4.0	SITE CHARACTERIZATION AND REMEDIATION PLANNING	8
4.1	Metals	8
4.2	PCBs	9
4.3	Delineation of Remediation Areas	10
5.0	PROJECT DESCRIPTION AND REGULATORY COMPLIANCE	11
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9	Southwest Marine Sample Locations with Surficial PCB Levels Exceeding the AET Concentration (0.95 mg/kg)
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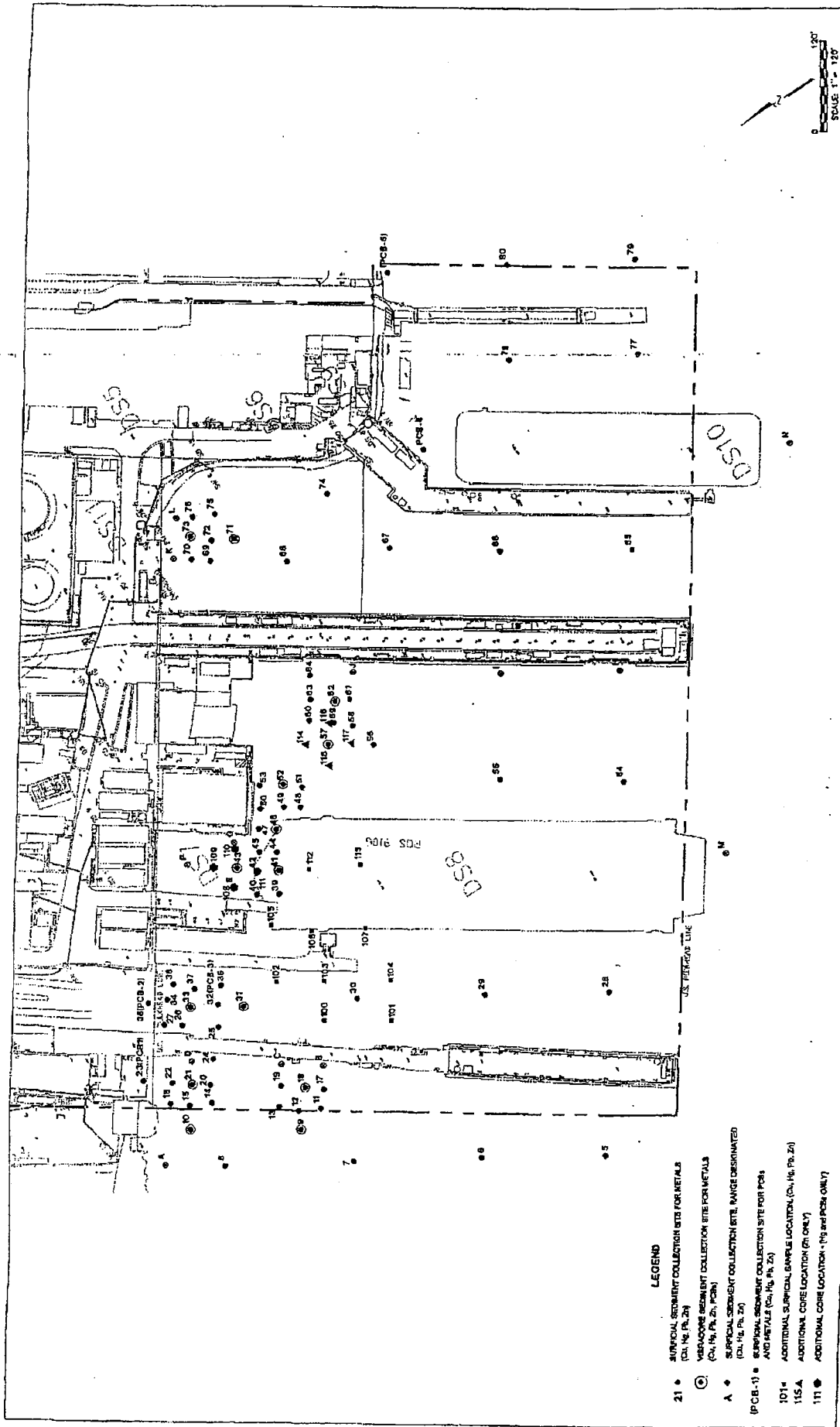
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17	Photographic Documentation of Cores 71, 73, and 108, Southwest Marine Shipyard
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1	Average Indicator Chemical Levels for NPDES Stations, with Cleanup Levels
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3	Core Log Information and Core DGPS Locations
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5	Sediment Lead Concentrations in the SWM Leasehold
6	Sediment Mercury Concentrations in the SWM Leasehold
7	Sediment Zinc Concentrations in the SWM Leasehold
8	Sediment PCBs Concentrations in the SWM Leasehold



LEGEND

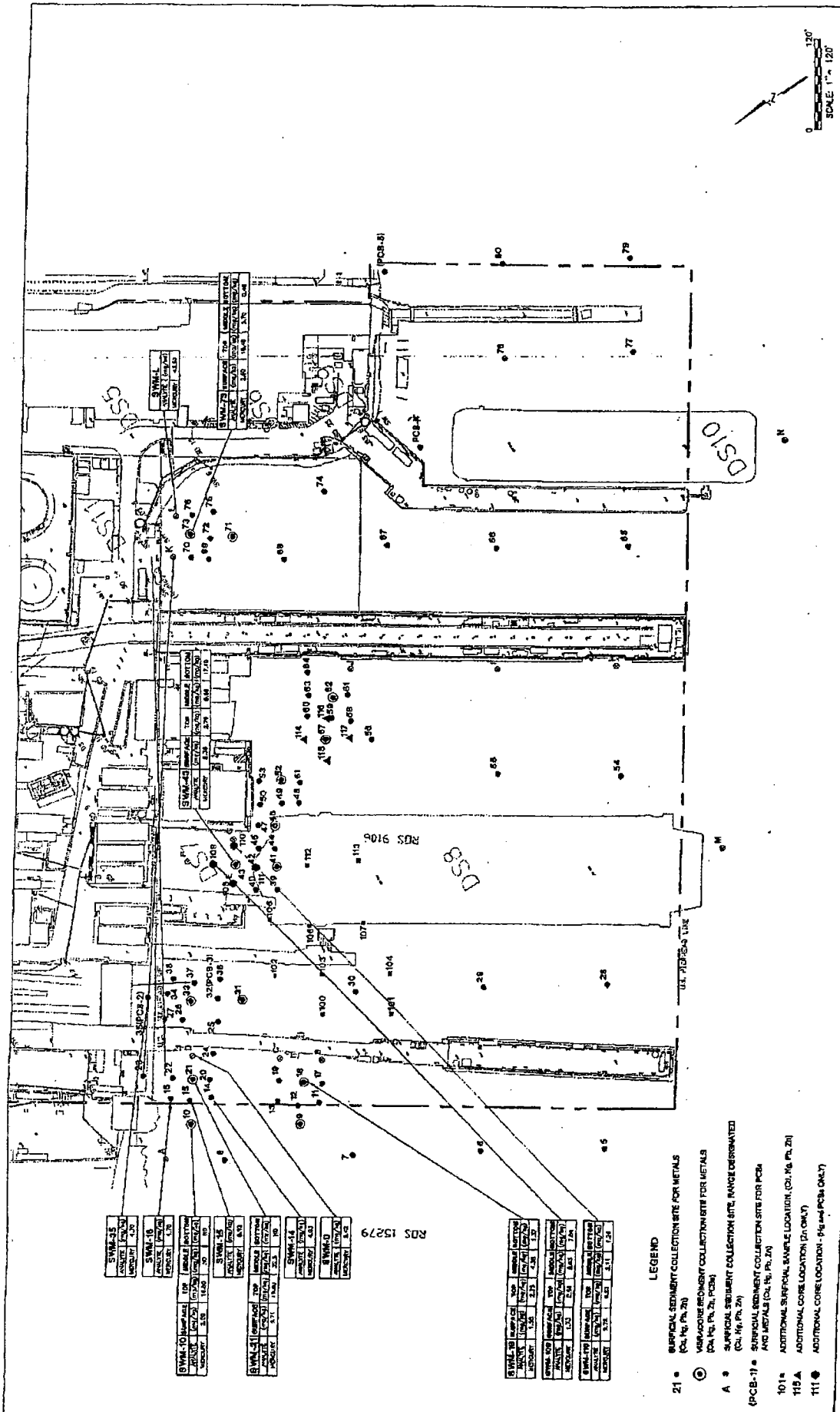
- 21 • SURFICIAL SEDIMENT COLLECTION SITE FOR METALS (Cu, Hg, Pb, Zn)
- 21 • VARIATIONS SEDIMENT COLLECTION SITE FOR METALS (Cu, Hg, Pb, Zn, PCBs)
- A • SURFICIAL SEDIMENT COLLECTION SITE RANGE DESIGNATED (Cu, Hg, Pb, Zn)
- (PCB-1) • SURFICIAL SEDIMENT COLLECTION SITE FOR PCBs AND METALS (Cu, Hg, Pb, Zn)
- 101 • ADDITIONAL SURFICIAL SAMPLE LOCATION (Cu, Hg, Pb, Zn)
- 115A • ADDITIONAL CORE LOCATION (PH ONLY)
- 111 • ADDITIONAL CORE LOCATION (PH AND PCBs ONLY)

FIGURE 4

Actual Sampling Stations, including Additional Sampling Locations
Southwest Marine Shipyard



SAR061855



SCALE: 1" = 120'
0 120'

FIGURE 7

Southwest Marine Sample Locations with Sediment Mercury Levels Exceeding the AET Concentration (4.2 mg/kg)

SW-10	SW-11	SW-12	SW-13	SW-14	SW-15	SW-16	SW-17	SW-18	SW-19	SW-20	SW-21	SW-22	SW-23	SW-24	SW-25	SW-26	SW-27	SW-28	SW-29	SW-30	SW-31	SW-32	SW-33	SW-34	SW-35	SW-36	SW-37	SW-38	SW-39	SW-40	SW-41	SW-42	SW-43	SW-44	SW-45	SW-46	SW-47	SW-48	SW-49	SW-50	SW-51	SW-52	SW-53	SW-54	SW-55	SW-56	SW-57	SW-58	SW-59	SW-60	SW-61	SW-62	SW-63	SW-64	SW-65	SW-66	SW-67	SW-68	SW-69	SW-70	SW-71	SW-72	SW-73	SW-74	SW-75	SW-76	SW-77	SW-78	SW-79	SW-80	SW-81	SW-82	SW-83	SW-84	SW-85	SW-86	SW-87	SW-88	SW-89	SW-90	SW-91	SW-92	SW-93	SW-94	SW-95	SW-96	SW-97	SW-98	SW-99	SW-100
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

RDS 15279

SW-10	SW-11	SW-12	SW-13	SW-14	SW-15	SW-16	SW-17	SW-18	SW-19	SW-20	SW-21	SW-22	SW-23	SW-24	SW-25	SW-26	SW-27	SW-28	SW-29	SW-30	SW-31	SW-32	SW-33	SW-34	SW-35	SW-36	SW-37	SW-38	SW-39	SW-40	SW-41	SW-42	SW-43	SW-44	SW-45	SW-46	SW-47	SW-48	SW-49	SW-50	SW-51	SW-52	SW-53	SW-54	SW-55	SW-56	SW-57	SW-58	SW-59	SW-60	SW-61	SW-62	SW-63	SW-64	SW-65	SW-66	SW-67	SW-68	SW-69	SW-70	SW-71	SW-72	SW-73	SW-74	SW-75	SW-76	SW-77	SW-78	SW-79	SW-80	SW-81	SW-82	SW-83	SW-84	SW-85	SW-86	SW-87	SW-88	SW-89	SW-90	SW-91	SW-92	SW-93	SW-94	SW-95	SW-96	SW-97	SW-98	SW-99	SW-100
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

- LEGEND**
- 21 • SURFICIAL SEDIMENT COLLECTION SITE FOR METALS (Cd, Hg, Pb, Zn)
 - VARIATION/REWORK COLLECTION SITE FOR METALS (Cd, Hg, Pb, Zn, PCBs)
 - A • SURFICIAL SEDIMENT COLLECTION SITE, RANGE DETERMINED (Cd, Hg, Pb, Zn)
 - (PCB-1) • SURFICIAL SEDIMENT COLLECTION SITE FOR PCB AND METALS (Cd, Hg, Pb, Zn)
 - 101 • ADDITIONAL SURFICIAL SAMPLE LOCATION (Cd, Hg, Pb, Zn)
 - 119 A ADDITIONAL CORE LOCATION (Zn ONLY)
 - 111 • ADDITIONAL CORE LOCATION - 15g (± PCBs ONLY)



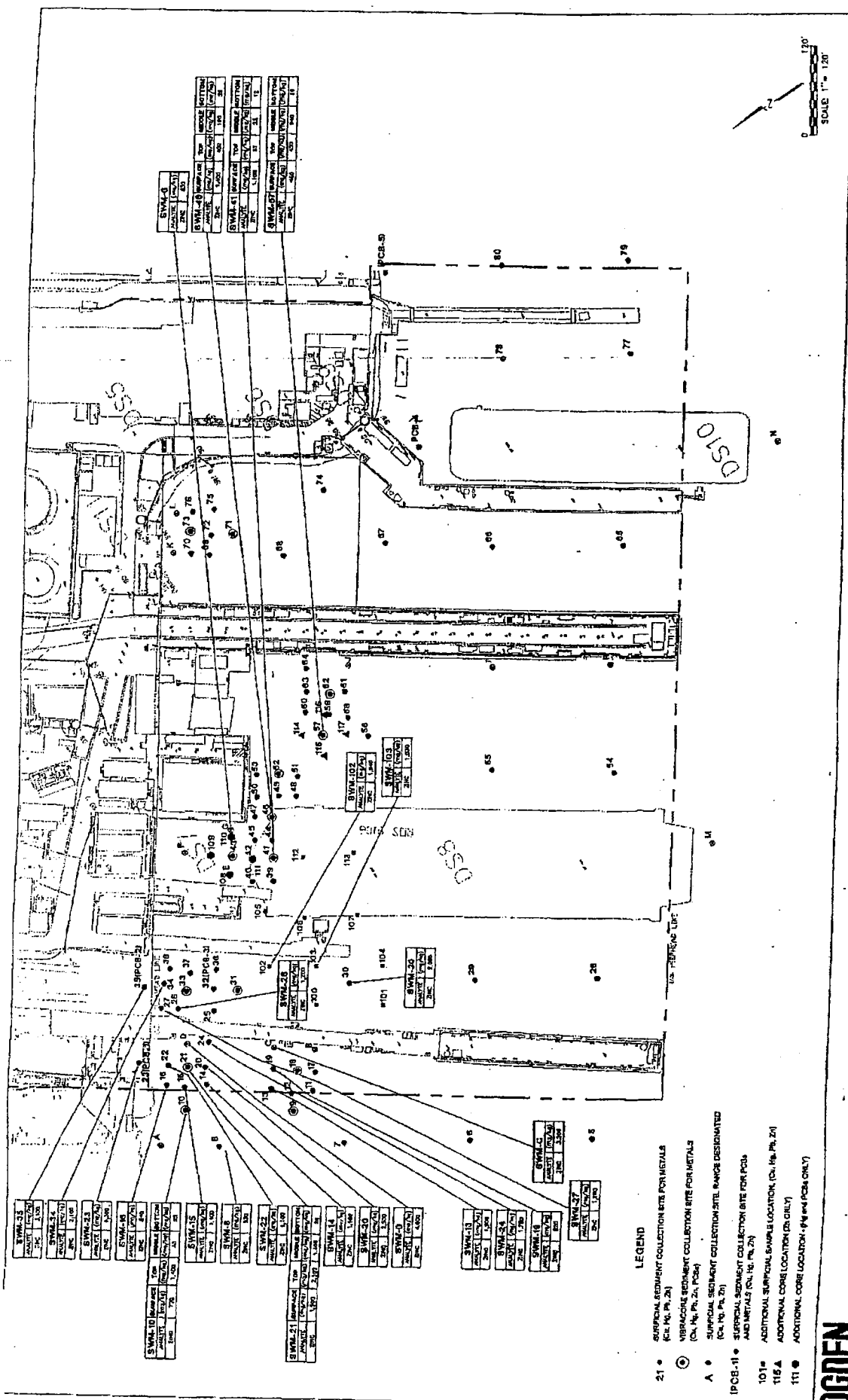


FIGURE 8

Southwest Marine Sample Locations with Sediment Zinc Levels Exceeding the AET Concentration (820 mg/kg)

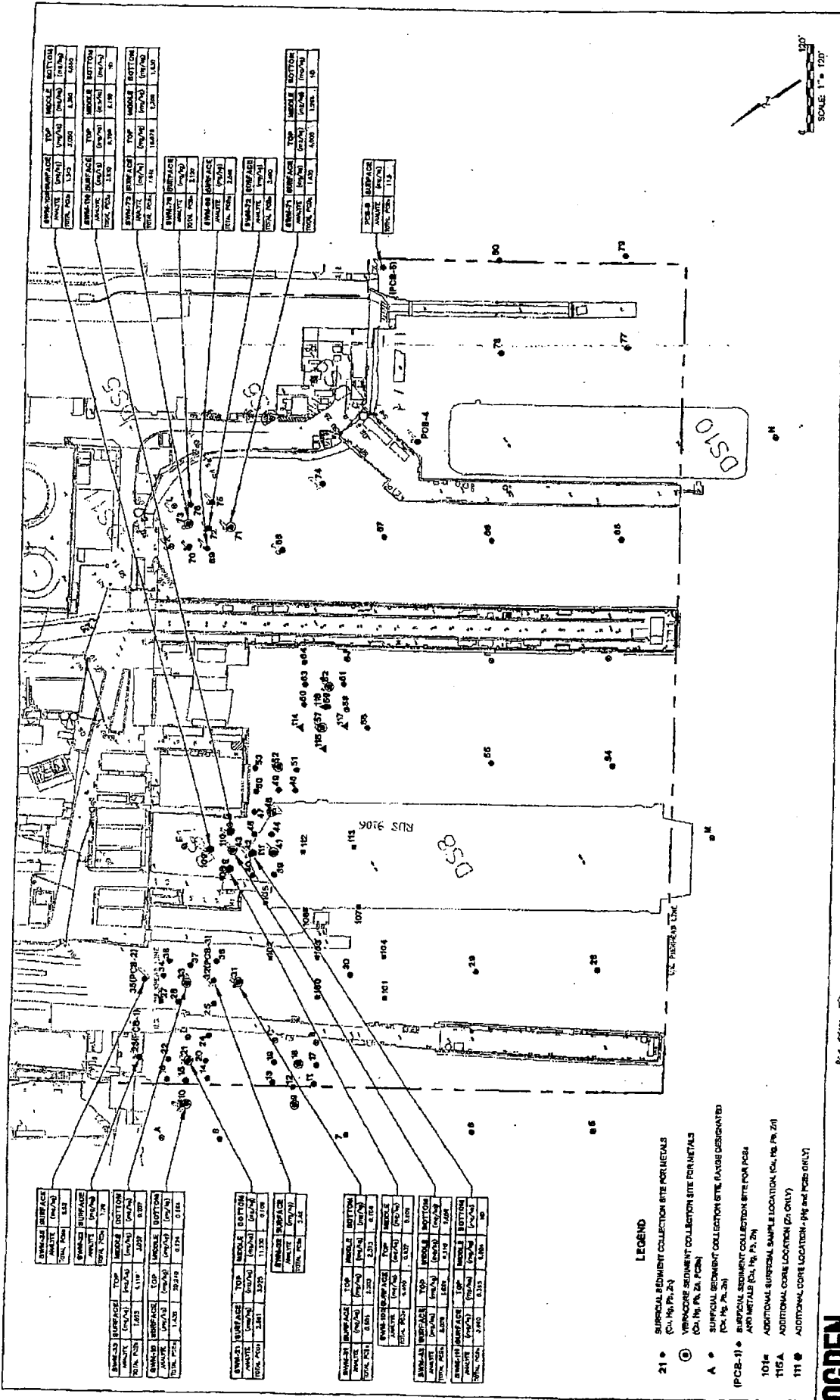
S.W.M. ID	DEPTH (FT)	DEPTH (M)	LOCATION
S.W.M. 10	1.00	0.30	100
S.W.M. 11	1.00	0.30	101
S.W.M. 12	1.00	0.30	102
S.W.M. 13	1.00	0.30	103
S.W.M. 14	1.00	0.30	104
S.W.M. 15	1.00	0.30	105
S.W.M. 16	1.00	0.30	106
S.W.M. 17	1.00	0.30	107
S.W.M. 18	1.00	0.30	108
S.W.M. 19	1.00	0.30	109
S.W.M. 20	1.00	0.30	110
S.W.M. 21	1.00	0.30	111
S.W.M. 22	1.00	0.30	112
S.W.M. 23	1.00	0.30	113
S.W.M. 24	1.00	0.30	114
S.W.M. 25	1.00	0.30	115
S.W.M. 26	1.00	0.30	116
S.W.M. 27	1.00	0.30	117
S.W.M. 28	1.00	0.30	118
S.W.M. 29	1.00	0.30	119
S.W.M. 30	1.00	0.30	120
S.W.M. 31	1.00	0.30	121
S.W.M. 32	1.00	0.30	122
S.W.M. 33	1.00	0.30	123
S.W.M. 34	1.00	0.30	124
S.W.M. 35	1.00	0.30	125
S.W.M. 36	1.00	0.30	126
S.W.M. 37	1.00	0.30	127
S.W.M. 38	1.00	0.30	128
S.W.M. 39	1.00	0.30	129
S.W.M. 40	1.00	0.30	130
S.W.M. 41	1.00	0.30	131
S.W.M. 42	1.00	0.30	132
S.W.M. 43	1.00	0.30	133
S.W.M. 44	1.00	0.30	134
S.W.M. 45	1.00	0.30	135
S.W.M. 46	1.00	0.30	136
S.W.M. 47	1.00	0.30	137
S.W.M. 48	1.00	0.30	138
S.W.M. 49	1.00	0.30	139
S.W.M. 50	1.00	0.30	140
S.W.M. 51	1.00	0.30	141
S.W.M. 52	1.00	0.30	142
S.W.M. 53	1.00	0.30	143
S.W.M. 54	1.00	0.30	144
S.W.M. 55	1.00	0.30	145
S.W.M. 56	1.00	0.30	146
S.W.M. 57	1.00	0.30	147
S.W.M. 58	1.00	0.30	148
S.W.M. 59	1.00	0.30	149
S.W.M. 60	1.00	0.30	150
S.W.M. 61	1.00	0.30	151
S.W.M. 62	1.00	0.30	152
S.W.M. 63	1.00	0.30	153
S.W.M. 64	1.00	0.30	154
S.W.M. 65	1.00	0.30	155
S.W.M. 66	1.00	0.30	156
S.W.M. 67	1.00	0.30	157
S.W.M. 68	1.00	0.30	158
S.W.M. 69	1.00	0.30	159
S.W.M. 70	1.00	0.30	160
S.W.M. 71	1.00	0.30	161
S.W.M. 72	1.00	0.30	162
S.W.M. 73	1.00	0.30	163
S.W.M. 74	1.00	0.30	164
S.W.M. 75	1.00	0.30	165
S.W.M. 76	1.00	0.30	166
S.W.M. 77	1.00	0.30	167
S.W.M. 78	1.00	0.30	168
S.W.M. 79	1.00	0.30	169
S.W.M. 80	1.00	0.30	170
S.W.M. 81	1.00	0.30	171
S.W.M. 82	1.00	0.30	172
S.W.M. 83	1.00	0.30	173
S.W.M. 84	1.00	0.30	174
S.W.M. 85	1.00	0.30	175
S.W.M. 86	1.00	0.30	176
S.W.M. 87	1.00	0.30	177
S.W.M. 88	1.00	0.30	178
S.W.M. 89	1.00	0.30	179
S.W.M. 90	1.00	0.30	180
S.W.M. 91	1.00	0.30	181
S.W.M. 92	1.00	0.30	182
S.W.M. 93	1.00	0.30	183
S.W.M. 94	1.00	0.30	184
S.W.M. 95	1.00	0.30	185
S.W.M. 96	1.00	0.30	186
S.W.M. 97	1.00	0.30	187
S.W.M. 98	1.00	0.30	188
S.W.M. 99	1.00	0.30	189
S.W.M. 100	1.00	0.30	190

S.W.M. ID	DEPTH (FT)	DEPTH (M)	LOCATION
S.W.M. 101	1.00	0.30	101
S.W.M. 102	1.00	0.30	102
S.W.M. 103	1.00	0.30	103
S.W.M. 104	1.00	0.30	104
S.W.M. 105	1.00	0.30	105
S.W.M. 106	1.00	0.30	106
S.W.M. 107	1.00	0.30	107
S.W.M. 108	1.00	0.30	108
S.W.M. 109	1.00	0.30	109
S.W.M. 110	1.00	0.30	110
S.W.M. 111	1.00	0.30	111
S.W.M. 112	1.00	0.30	112
S.W.M. 113	1.00	0.30	113
S.W.M. 114	1.00	0.30	114
S.W.M. 115	1.00	0.30	115
S.W.M. 116	1.00	0.30	116
S.W.M. 117	1.00	0.30	117
S.W.M. 118	1.00	0.30	118
S.W.M. 119	1.00	0.30	119
S.W.M. 120	1.00	0.30	120
S.W.M. 121	1.00	0.30	121
S.W.M. 122	1.00	0.30	122
S.W.M. 123	1.00	0.30	123
S.W.M. 124	1.00	0.30	124
S.W.M. 125	1.00	0.30	125
S.W.M. 126	1.00	0.30	126
S.W.M. 127	1.00	0.30	127
S.W.M. 128	1.00	0.30	128
S.W.M. 129	1.00	0.30	129
S.W.M. 130	1.00	0.30	130
S.W.M. 131	1.00	0.30	131
S.W.M. 132	1.00	0.30	132
S.W.M. 133	1.00	0.30	133
S.W.M. 134	1.00	0.30	134
S.W.M. 135	1.00	0.30	135
S.W.M. 136	1.00	0.30	136
S.W.M. 137	1.00	0.30	137
S.W.M. 138	1.00	0.30	138
S.W.M. 139	1.00	0.30	139
S.W.M. 140	1.00	0.30	140
S.W.M. 141	1.00	0.30	141
S.W.M. 142	1.00	0.30	142
S.W.M. 143	1.00	0.30	143
S.W.M. 144	1.00	0.30	144
S.W.M. 145	1.00	0.30	145
S.W.M. 146	1.00	0.30	146
S.W.M. 147	1.00	0.30	147
S.W.M. 148	1.00	0.30	148
S.W.M. 149	1.00	0.30	149
S.W.M. 150	1.00	0.30	150

S.W.M. ID	DEPTH (FT)	DEPTH (M)	LOCATION
S.W.M. 151	1.00	0.30	151
S.W.M. 152	1.00	0.30	152
S.W.M. 153	1.00	0.30	153
S.W.M. 154	1.00	0.30	154
S.W.M. 155	1.00	0.30	155
S.W.M. 156	1.00	0.30	156
S.W.M. 157	1.00	0.30	157
S.W.M. 158	1.00	0.30	158
S.W.M. 159	1.00	0.30	159
S.W.M. 160	1.00	0.30	160
S.W.M. 161	1.00	0.30	161
S.W.M. 162	1.00	0.30	162
S.W.M. 163	1.00	0.30	163
S.W.M. 164	1.00	0.30	164
S.W.M. 165	1.00	0.30	165
S.W.M. 166	1.00	0.30	166
S.W.M. 167	1.00	0.30	167
S.W.M. 168	1.00	0.30	168
S.W.M. 169	1.00	0.30	169
S.W.M. 170	1.00	0.30	170
S.W.M. 171	1.00	0.30	171
S.W.M. 172	1.00	0.30	172
S.W.M. 173	1.00	0.30	173
S.W.M. 174	1.00	0.30	174
S.W.M. 175	1.00	0.30	175
S.W.M. 176	1.00	0.30	176
S.W.M. 177	1.00	0.30	177
S.W.M. 178	1.00	0.30	178
S.W.M. 179	1.00	0.30	179
S.W.M. 180	1.00	0.30	180
S.W.M. 181	1.00	0.30	181
S.W.M. 182	1.00	0.30	182
S.W.M. 183	1.00	0.30	183
S.W.M. 184	1.00	0.30	184
S.W.M. 185	1.00	0.30	185
S.W.M. 186	1.00	0.30	186
S.W.M. 187	1.00	0.30	187
S.W.M. 188	1.00	0.30	188
S.W.M. 189	1.00	0.30	189
S.W.M. 190	1.00	0.30	190

- LEGEND**
- 21 • SUPPLEMENTAL SEDIMENT COLLECTION SITE FOR METALS (C.F. No. 10, 21)
 - ⊙ VIBRACORE SEDIMENT COLLECTION SITE FOR METALS (C.F. No. 10, 21, PCBs)
 - A • SUPPLEMENTAL SEDIMENT COLLECTION SITE RANGE DESIGNATED (C.F. No. 10, 21)
 - PCB-11 • SUPPLEMENTAL SEDIMENT COLLECTION SITE FOR PCBs AND METALS (C.F. No. 10, 21)
 - 101 • ADDITIONAL SUPPLEMENTAL SWM SAMPLE LOCATION (C.F. No. 10, 21)
 - 115A • ADDITIONAL CORE LOCATION (C.F. ONLY)
 - 111 • ADDITIONAL CORE LOCATION (C.F. AND PCBs OR 17)





SURFICIAL SURFACE		TOP		MIDDLE		BOTTOM	
ANALYTE	CONC. (mg/kg)	DEPTH (ft)	CONC. (mg/kg)	DEPTH (ft)	CONC. (mg/kg)	DEPTH (ft)	CONC. (mg/kg)
PCB-1	1.22	1.13	2.07	0.87			
TOTAL PCB	2.81						

SURFICIAL SURFACE		TOP		MIDDLE		BOTTOM	
ANALYTE	CONC. (mg/kg)	DEPTH (ft)	CONC. (mg/kg)	DEPTH (ft)	CONC. (mg/kg)	DEPTH (ft)	CONC. (mg/kg)
PCB-1	1.22	1.13	2.07	0.87			
TOTAL PCB	2.81						

SURFICIAL SURFACE		TOP		MIDDLE		BOTTOM	
ANALYTE	CONC. (mg/kg)	DEPTH (ft)	CONC. (mg/kg)	DEPTH (ft)	CONC. (mg/kg)	DEPTH (ft)	CONC. (mg/kg)
PCB-1	1.22	1.13	2.07	0.87			
TOTAL PCB	2.81						

SURFICIAL SURFACE		TOP		MIDDLE		BOTTOM	
ANALYTE	CONC. (mg/kg)	DEPTH (ft)	CONC. (mg/kg)	DEPTH (ft)	CONC. (mg/kg)	DEPTH (ft)	CONC. (mg/kg)
PCB-1	1.22	1.13	2.07	0.87			
TOTAL PCB	2.81						

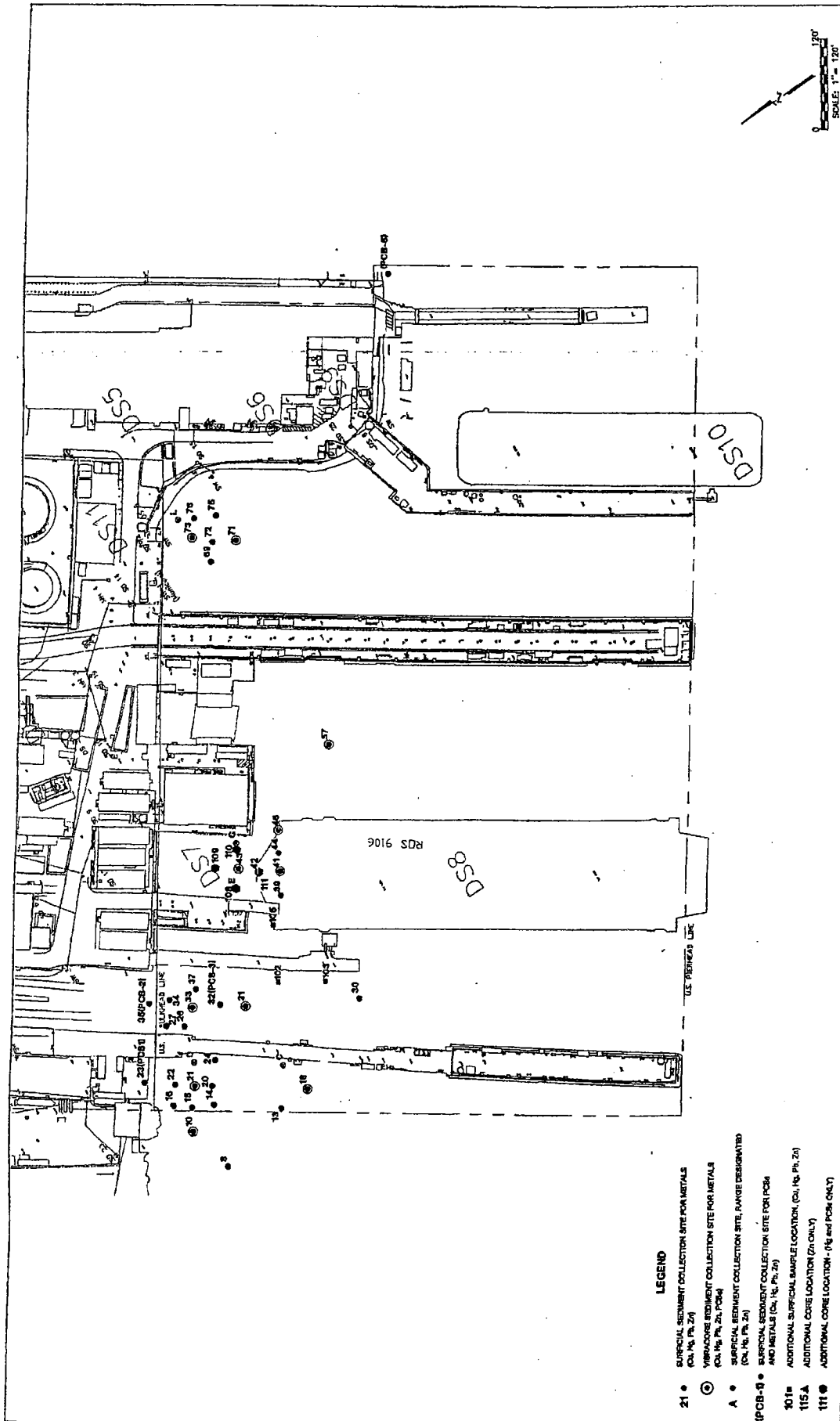
- LEGEND**
- 21 • SURFICIAL SEDIMENT COLLECTION SITE FOR METALS (CA, Hg, Pb, Zn)
 - ⊙ VIBROCORE SEDIMENT COLLECTION SITE FOR METALS (CA, Hg, Pb, Zn, PCB)
 - A • SURFICIAL SEDIMENT COLLECTION SITE (DUDGE DESIGNATED) (PCB, Hg, Pb, Zn)
 - (PCB-1) • SURFICIAL SEDIMENT COLLECTION SITE FOR PCB AND METALS (CA, Hg, Pb, Zn)
 - 101 • ADDITIONAL SURFICIAL SAMPLE LOCATION (CA, Hg, Pb, Zn)
 - 116A • ADDITIONAL CORE LOCATION (Zn ONLY)
 - 111 • ADDITIONAL CORE LOCATION - Hg and PCB ONLY

Southwest Marine Sample Locations with Surficial PCB Levels Exceeding the AET Concentration (0.95 mg/kg)

SCALE: 1" = 120'

FIGURE 9



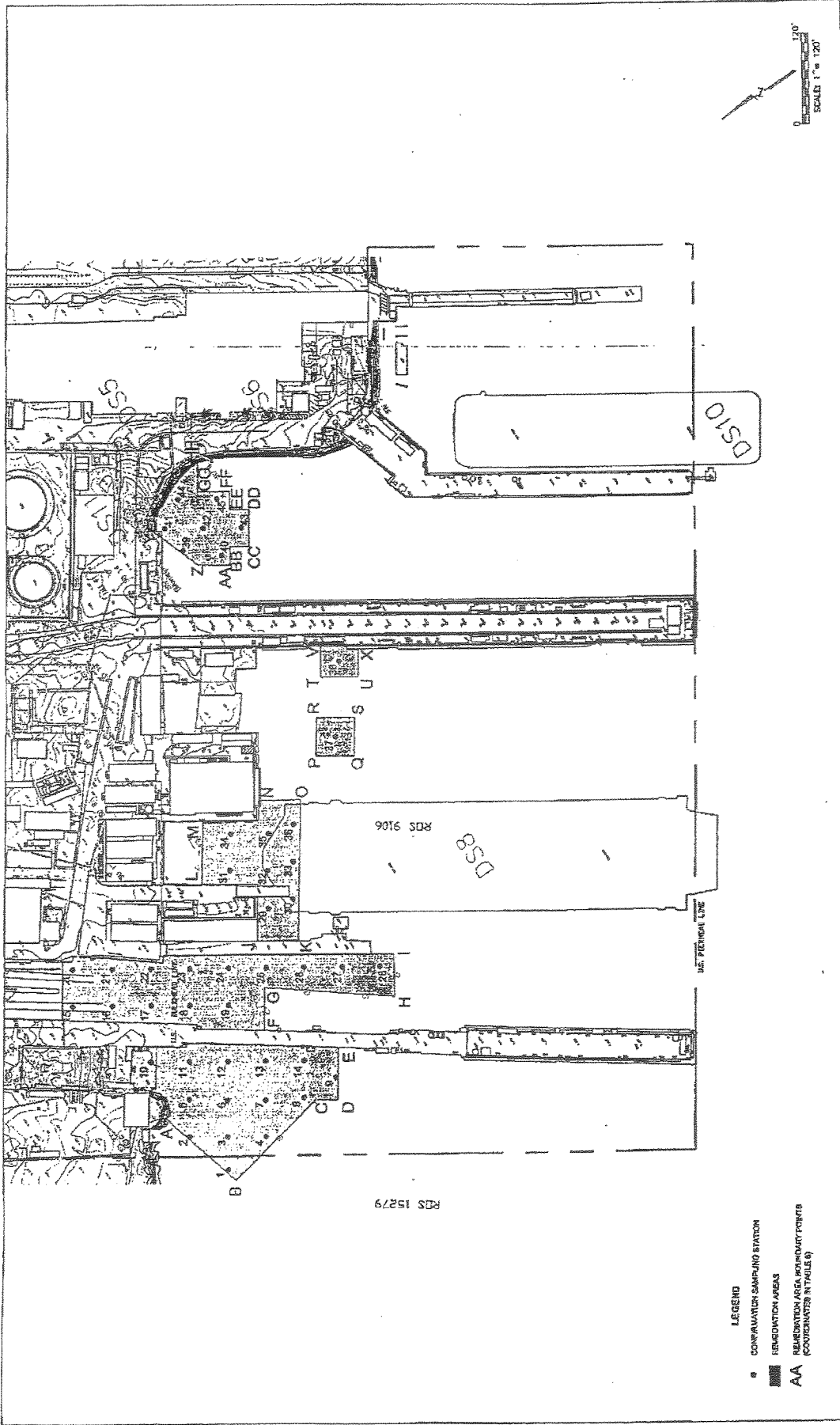


- LEGEND**
- 21 • SURFICIAL SEDIMENT COLLECTION SITE FOR METALS (Cu, Ni, Pb, Zn)
 - ⊙ WYRMACORE SEDIMENT COLLECTION SITE FOR METALS (Cu, Hg, Pb, Zn, PCBs)
 - A • SURFICIAL SEDIMENT COLLECTION SITE, RANGE DESIGNATED (Cu, Ni, Pb, Zn)
 - (PCB-0) • SURFICIAL SEDIMENT COLLECTION SITE FOR PCBs AND METALS (Cu, Ni, Pb, Zn)
 - 10 ft ADDITIONAL SURFICIAL SAMPLE LOCATION, (Cu, Ni, Pb, Zn)
 - 115 A ADDITIONAL CORE LOCATION (Zn ONLY)
 - 111 • ADDITIONAL CORE LOCATION - (Hg and PCBs ONLY)

FIGURE 10

Stations Exceeding an AET Concentration for Cu, Pb, Hg, Zn, and/or PCBs
Southwest Marine Shipyard





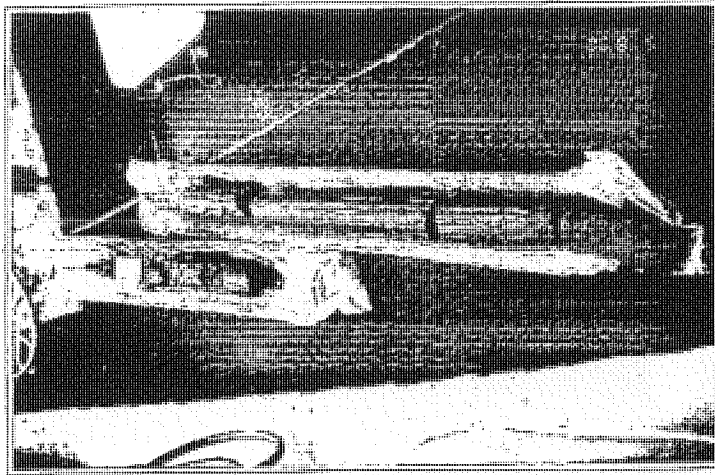
FIGURE

12

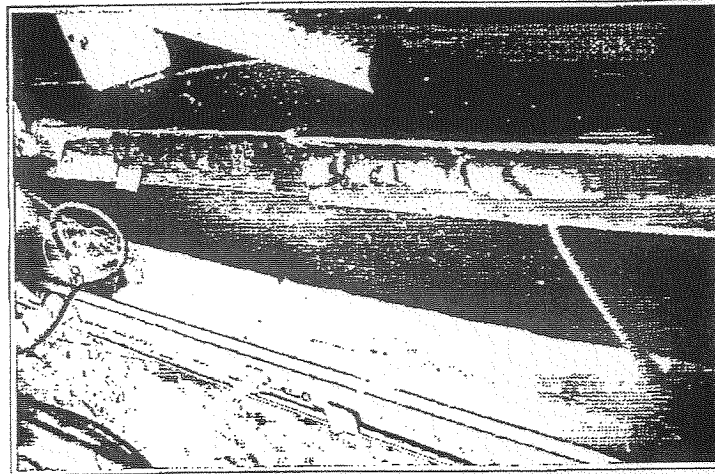
Remediation Confirmation Sampling Stations and Remediation Area Boundaries (See Table 8)
Southwest Marine Shipyard



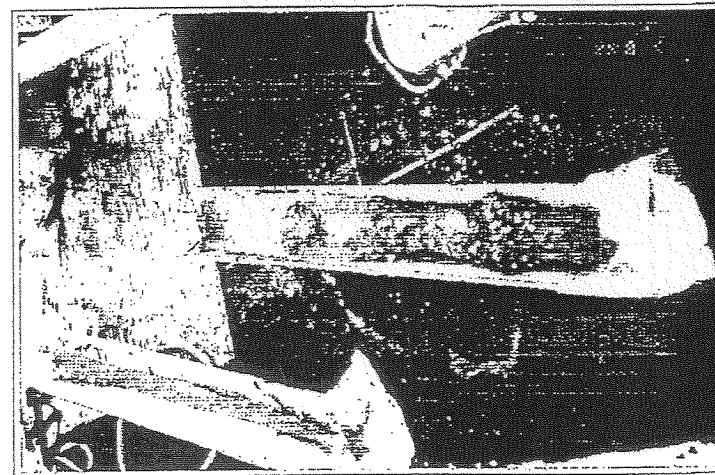
SAR061863



Core 18



Core 10



Core 9

FIGURE

13

Photographic Documentation of Cores 9, 10, and 18
Southwest Marine Shipyard

OGDEN

Recovery Unit/SAM/CORE PHOTOS 2.PPT

SAR061864

Woodward-Clyde

APPENDIX C

SAIC SEDIMENT SAMPLING REPORT - JANUARY 13, 1992

W:19453156ZARR01-A-R

jnsteno.com	EXHIBIT NO. _____
	1262 Barker

SAR056453

SEDIMENT SAMPLING AT
SOUTHWEST MARINE SHIPYARD
SAN DIEGO BAY, CALIFORNIA

FINAL REPORT

Prepared For:

Southwest Marine, Incorporated
Foot of Sampson Street
San Diego, California 92170

Prepared By:

Science Applications International Corporation
10260 Campus Point Drive
San Diego, California 92121

January 13, 1992

SAIC Project No. 01-0895-05-0616

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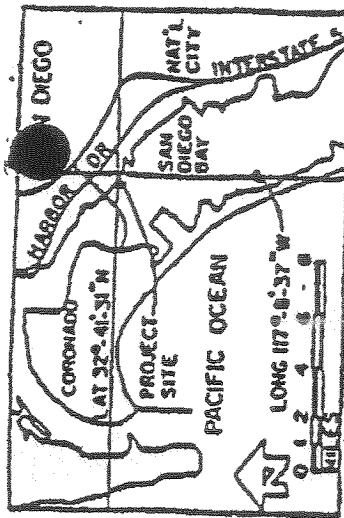
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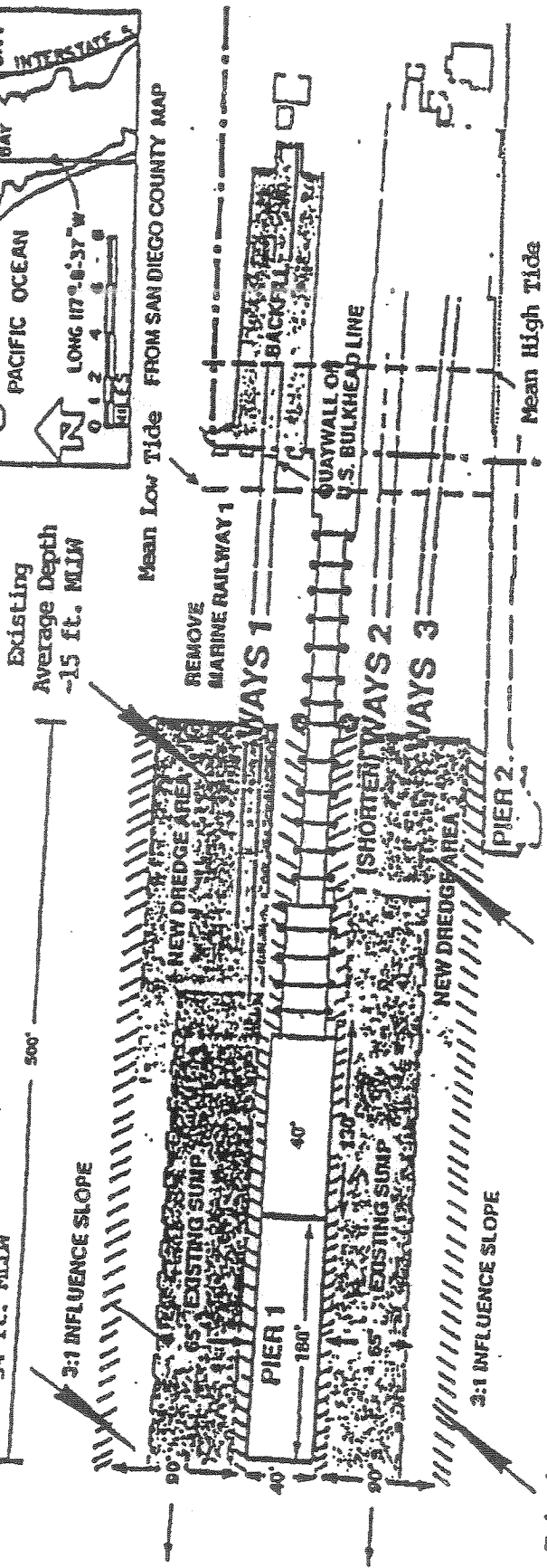
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Existing
Average Depth
-34 ft. MLLW



Existing
Average Depth
-15 ft. MLLW

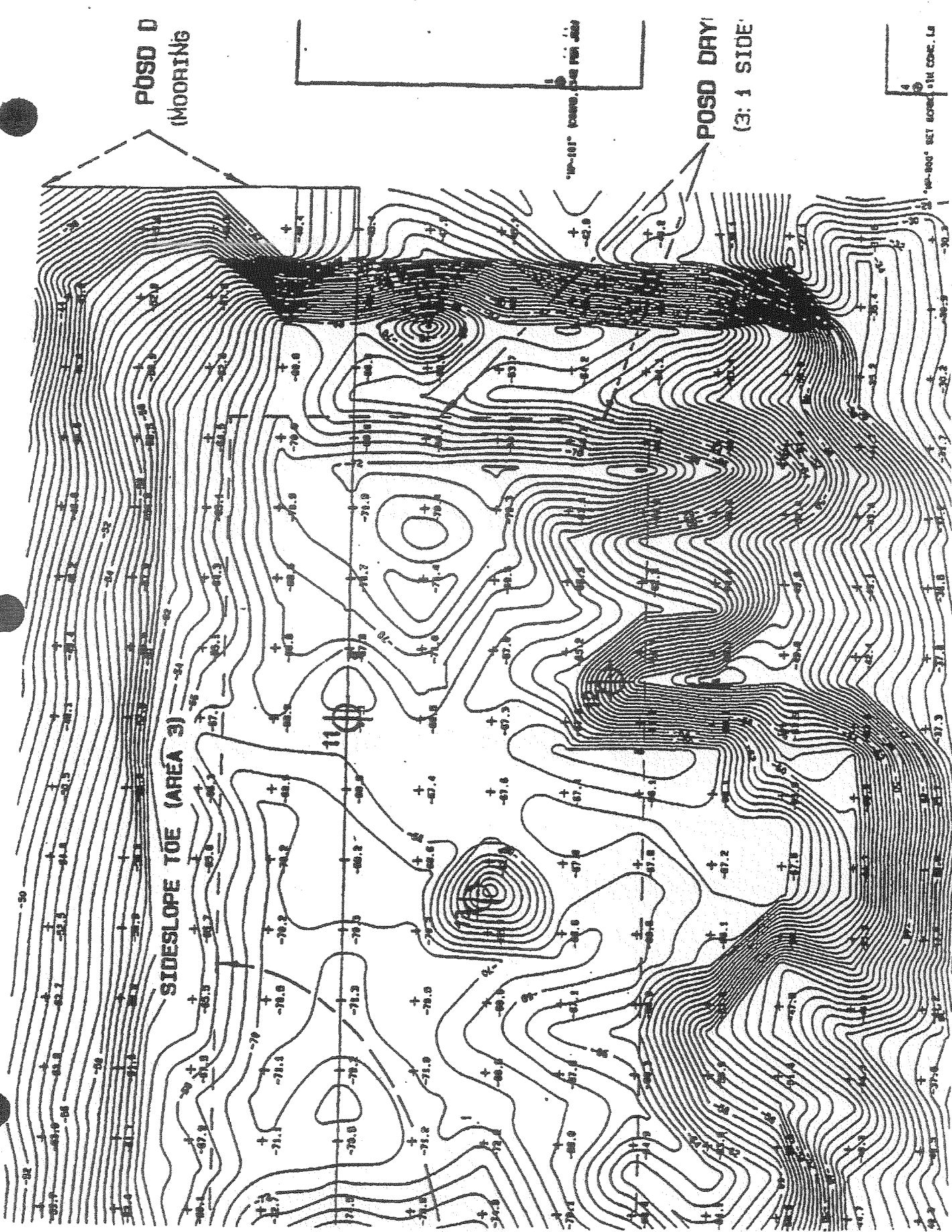
Existing
Average Depth
-15ft. MLLW

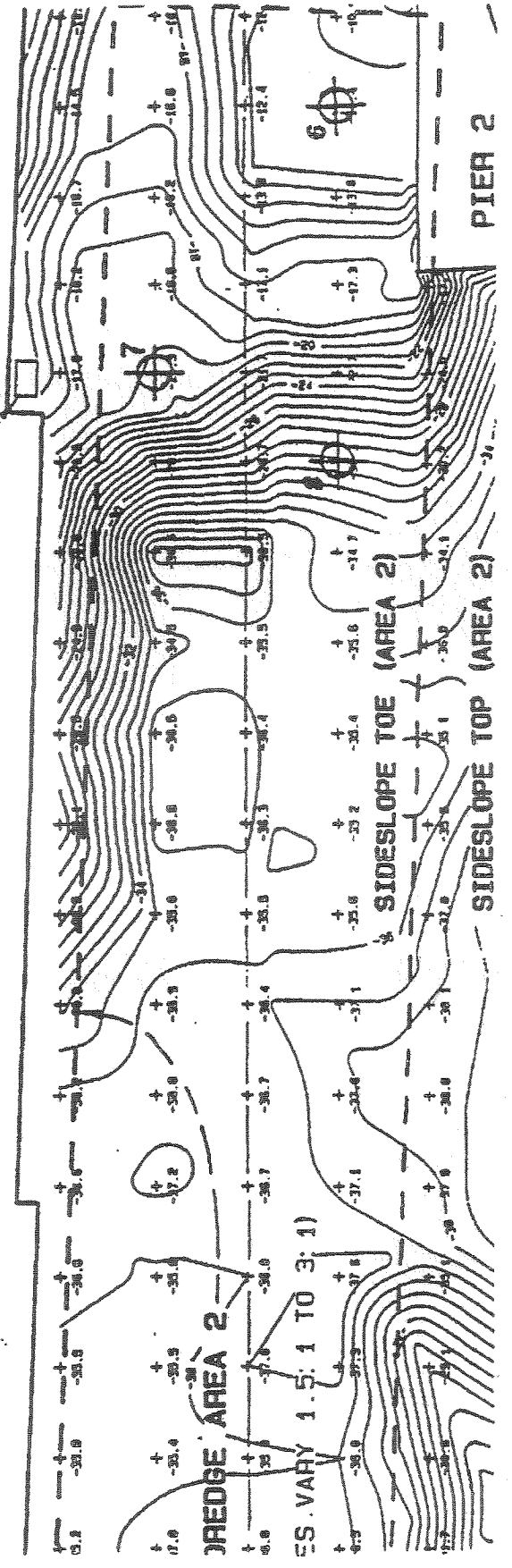
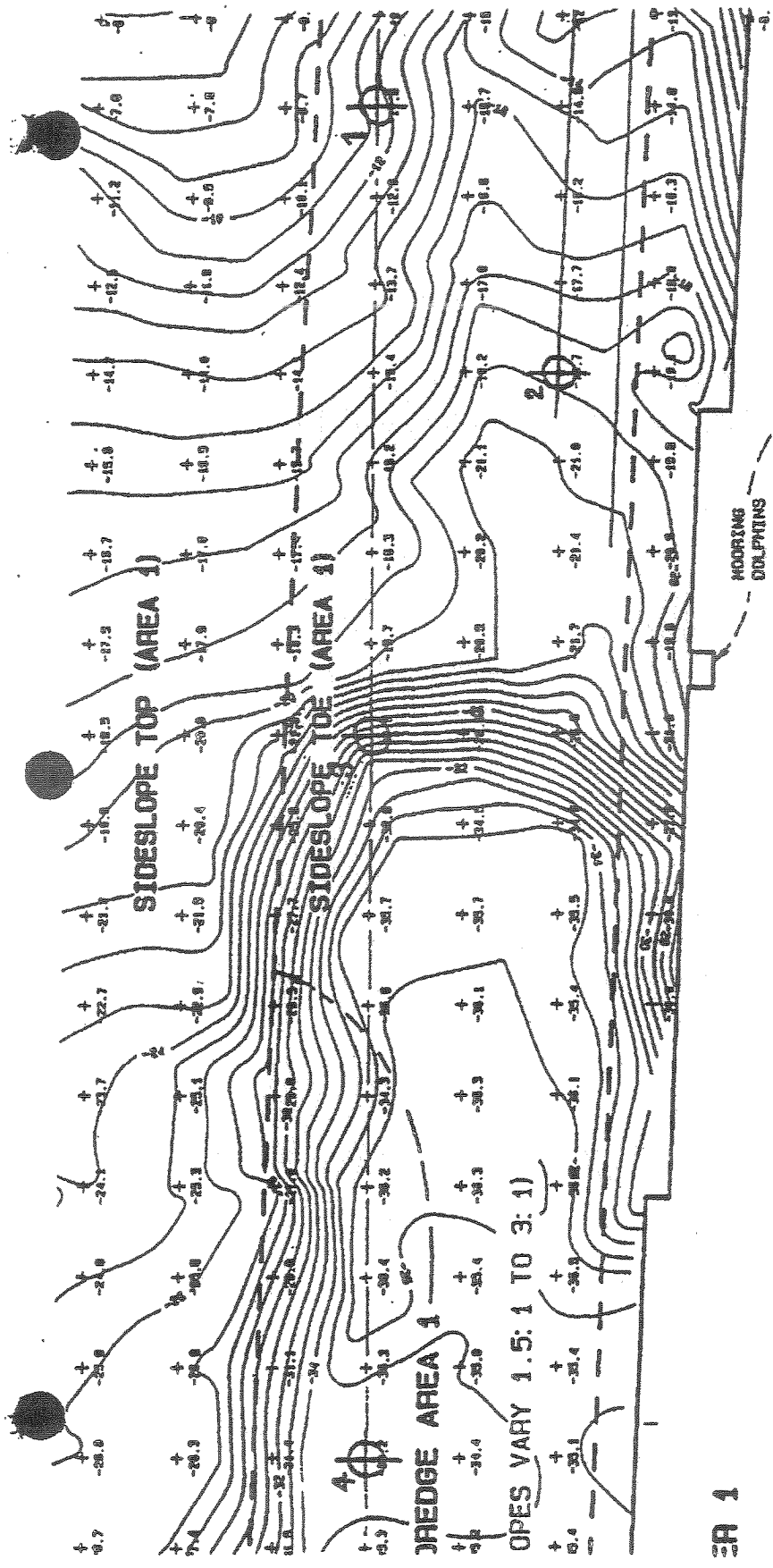
Existing
Average Depth
-33 ft. MLLW

PIER 1/POSD DRYDOCK SUMP DREDGING

IN SAN DIEGO
AT SAN DIEGO
COUNTY OF SAN DIEGO STATE OF CALIFORNIA
APPLICATION BY SOUTHWEST MARINE
SHEET 2 OF 3

August, 1991





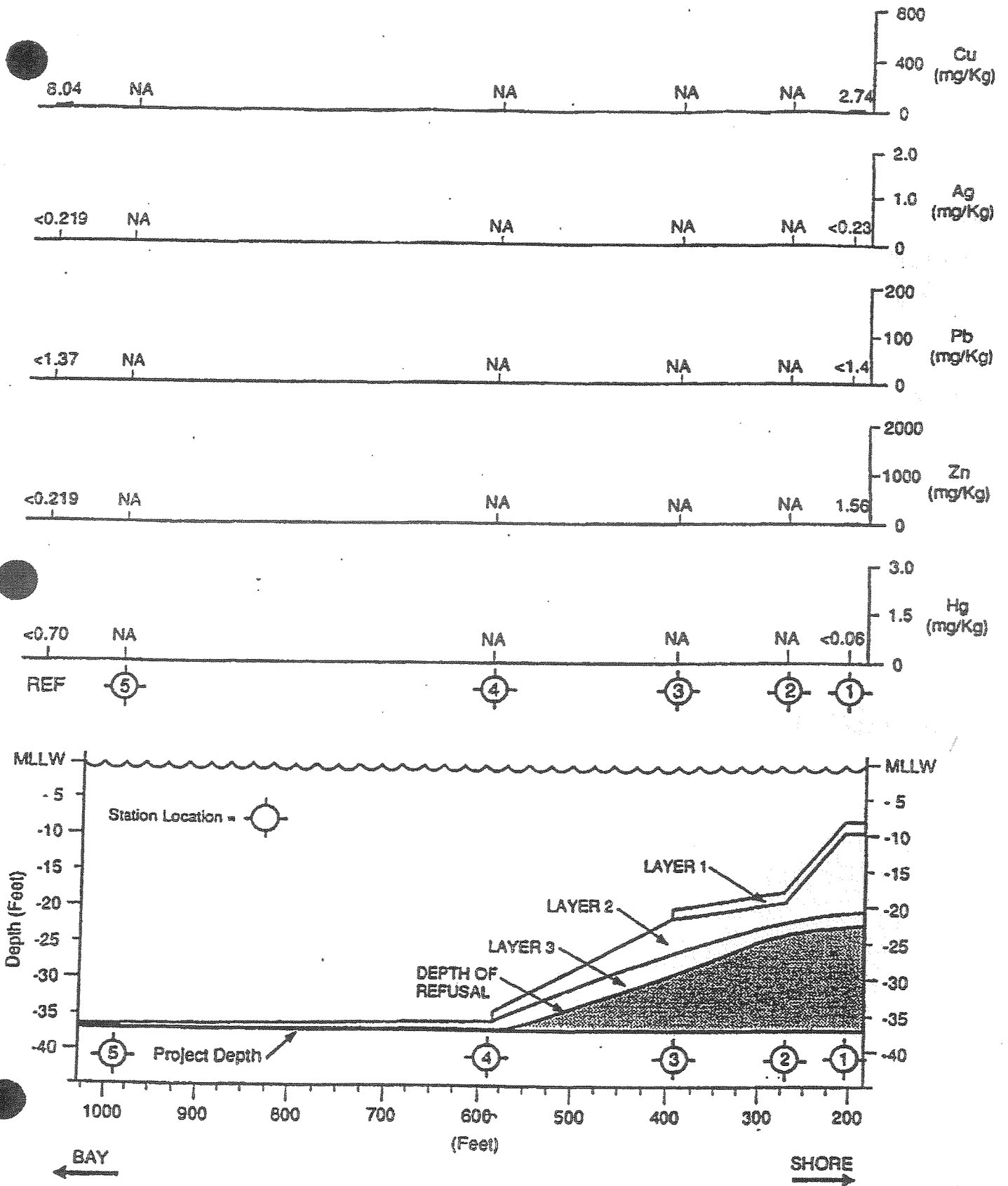


Figure 19d. Contaminant Concentrations for Pier 1 North: Refusal.

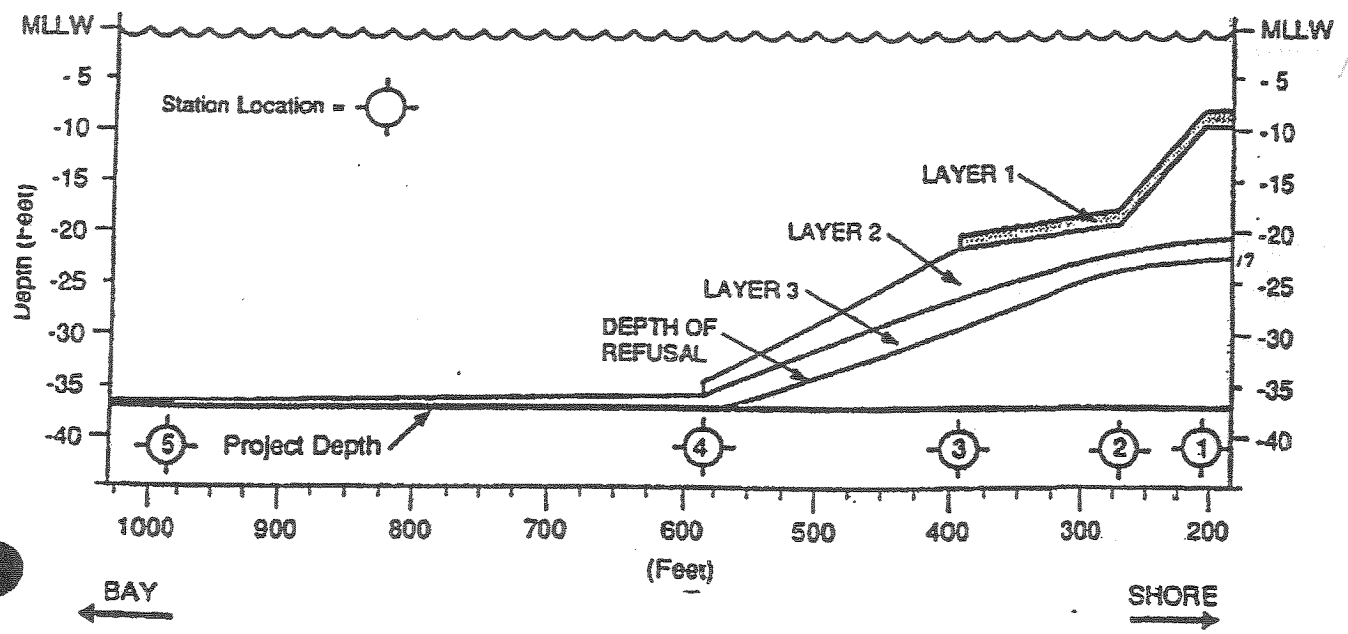
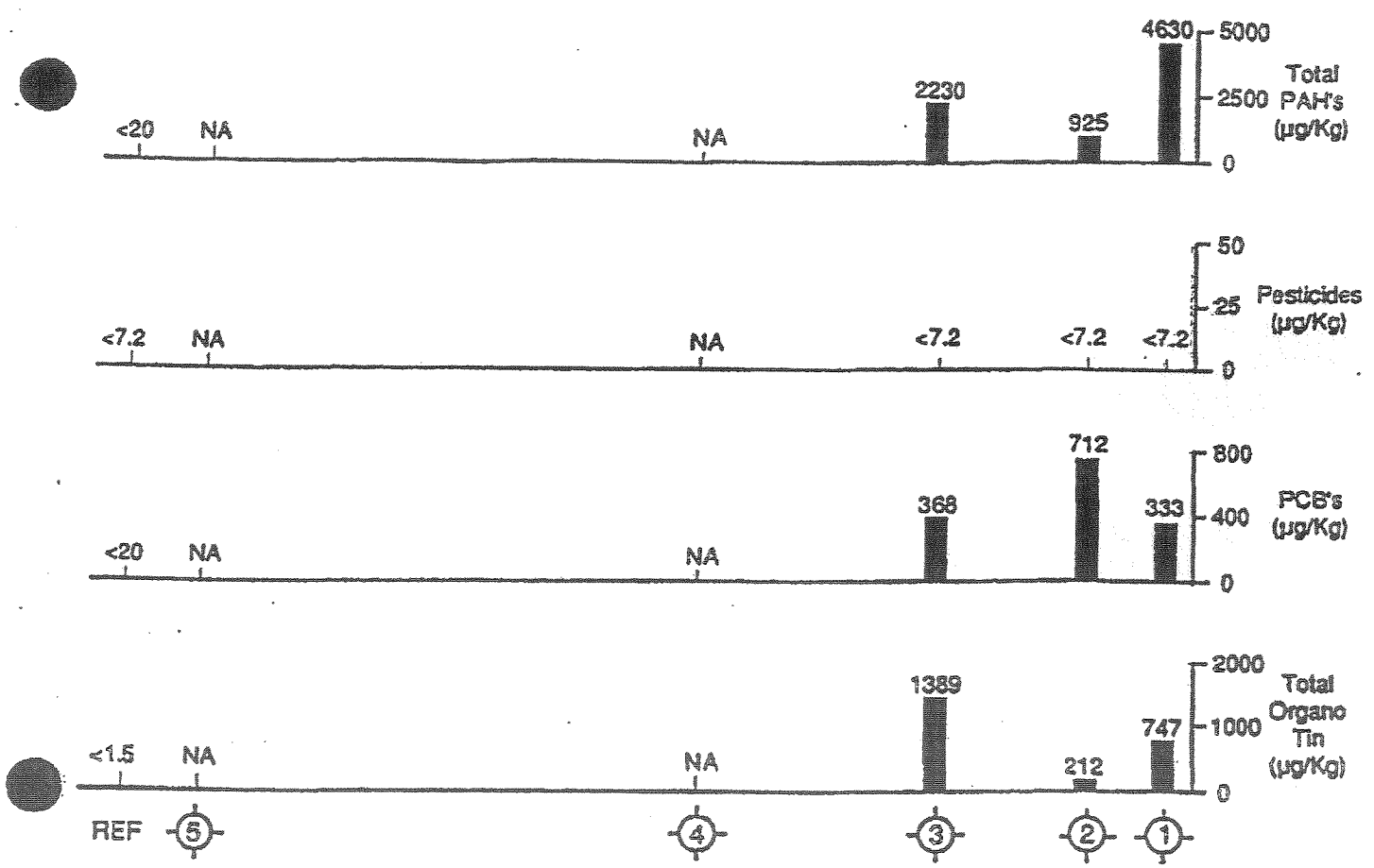


Figure 20a. Contaminant Concentrations for Pier 1 North; Layer 1.

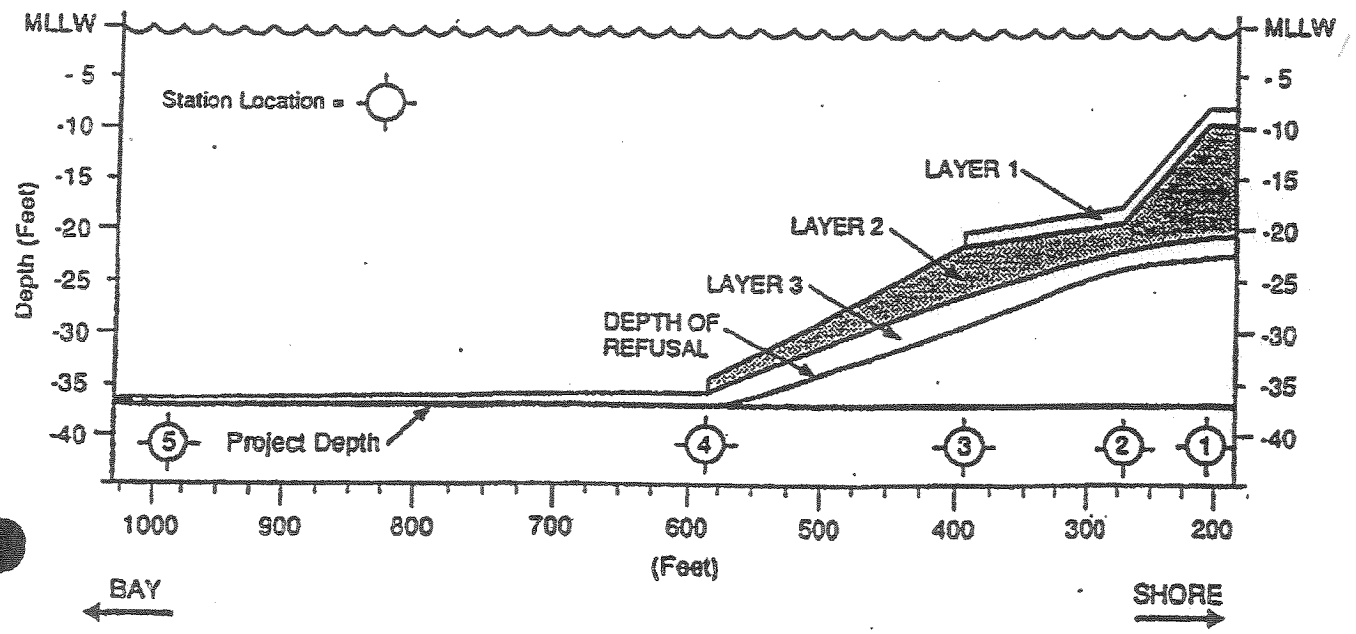
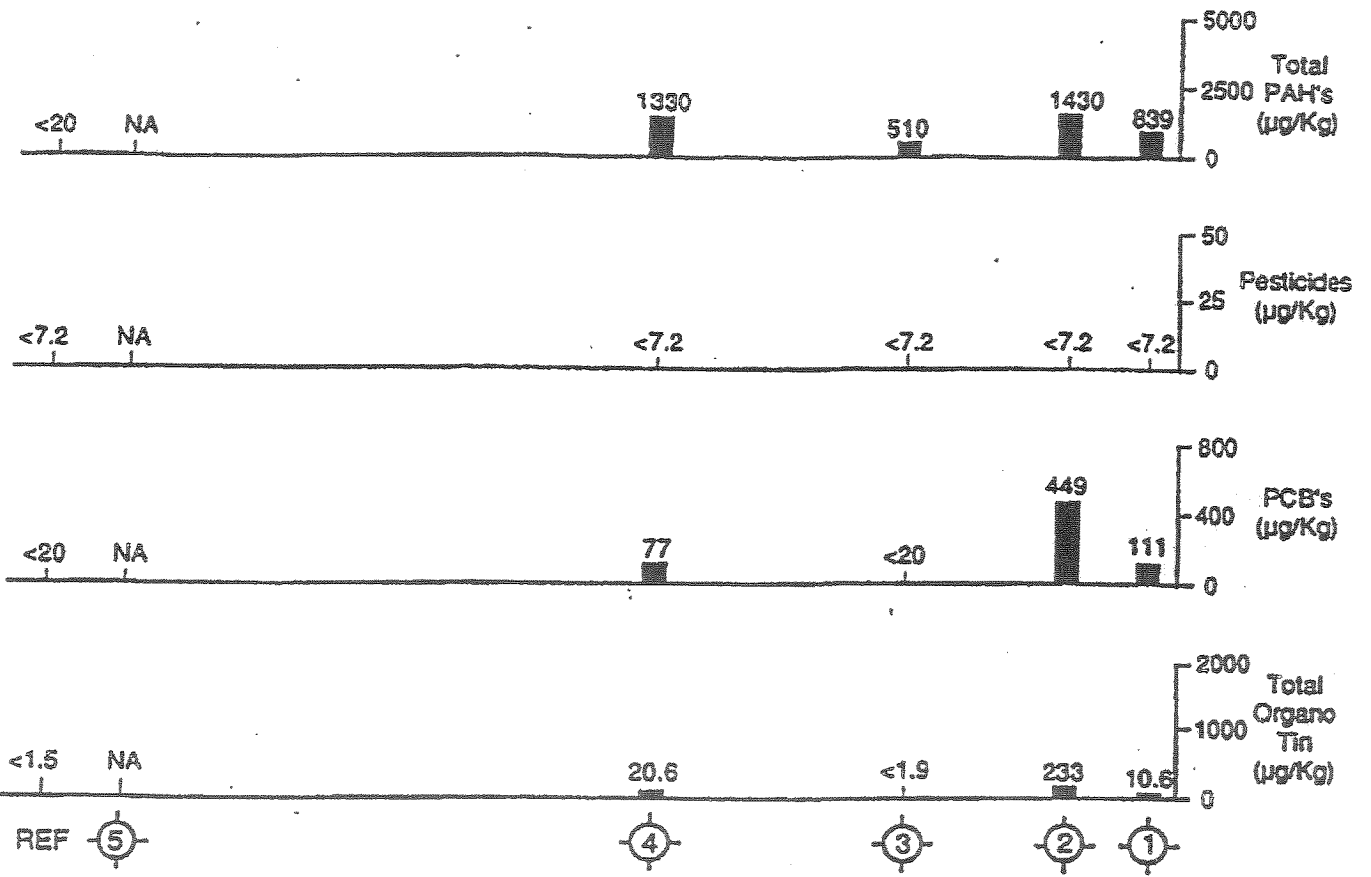


Figure 20b. Contaminant Concentrations for Pier 1 North; Layer 2.

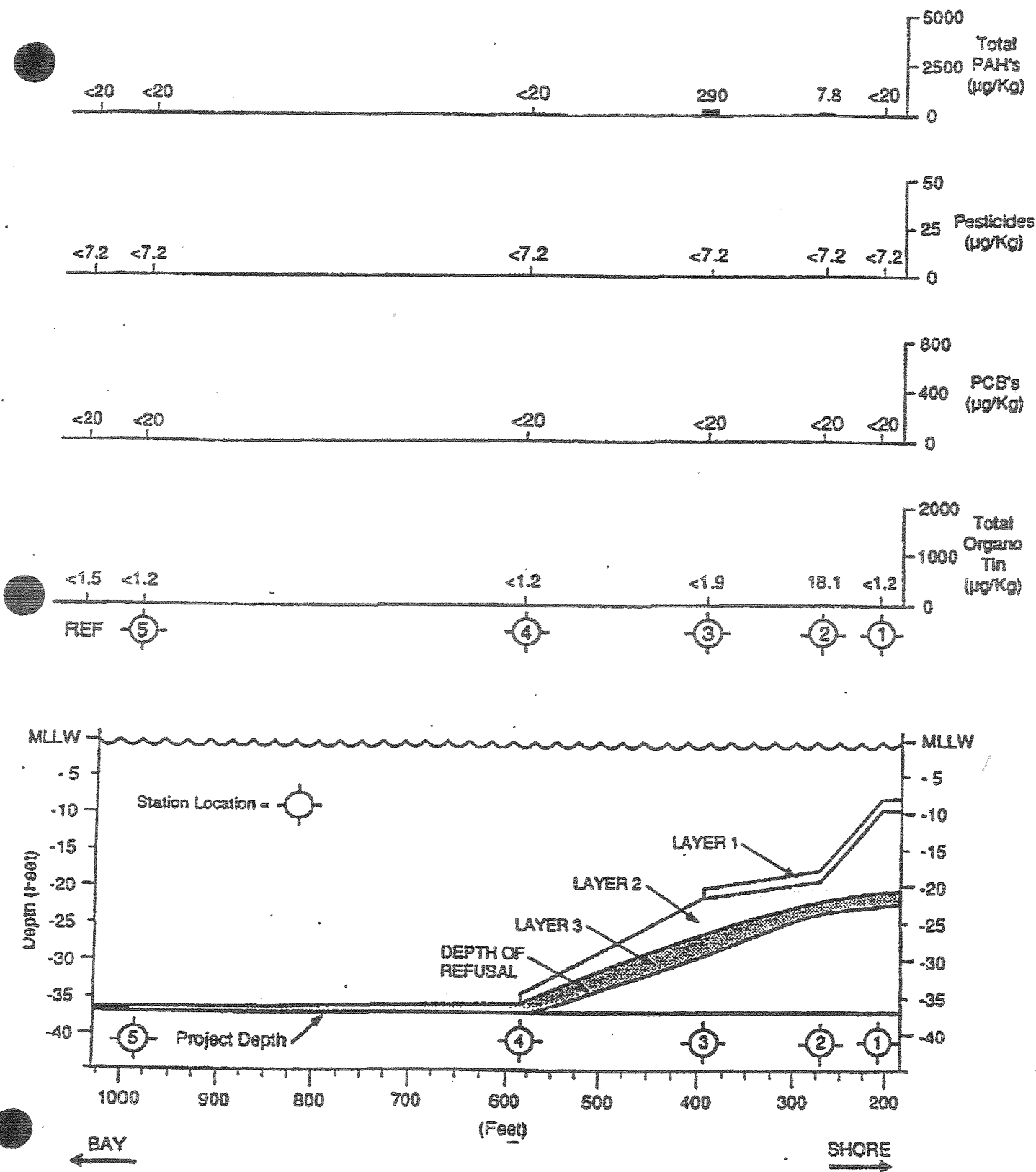


Figure 20c. Contaminant Concentrations for Pier 1 North; Layer 3.

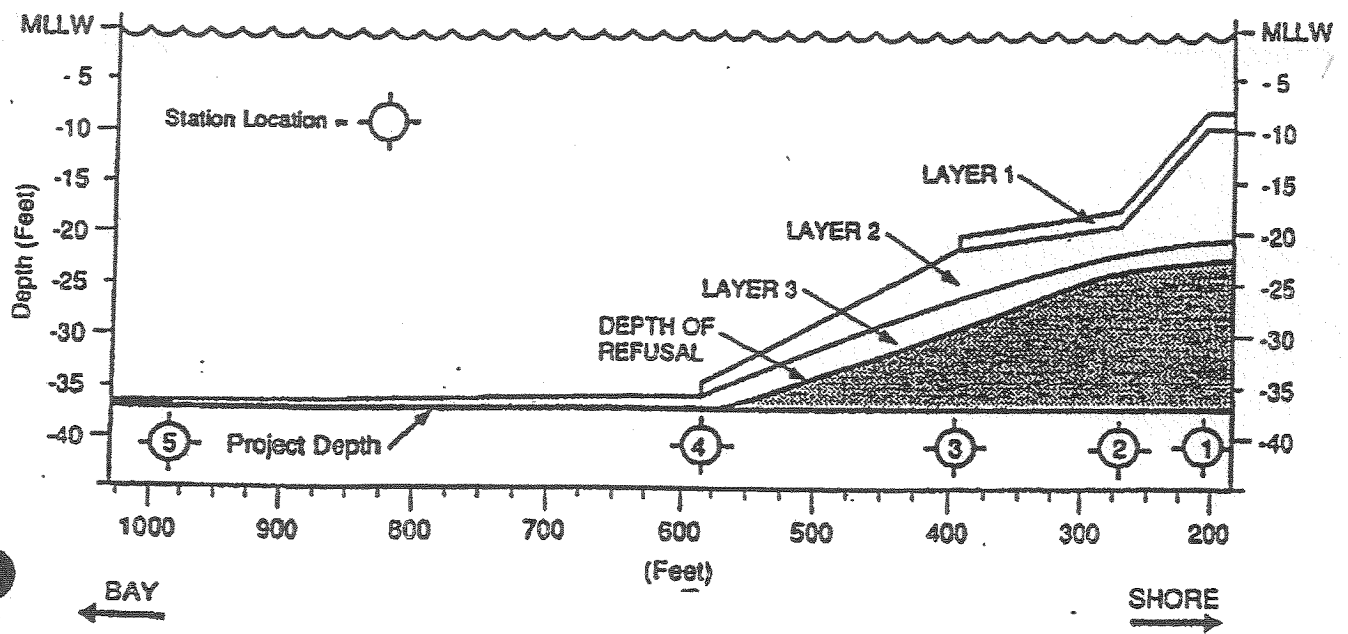
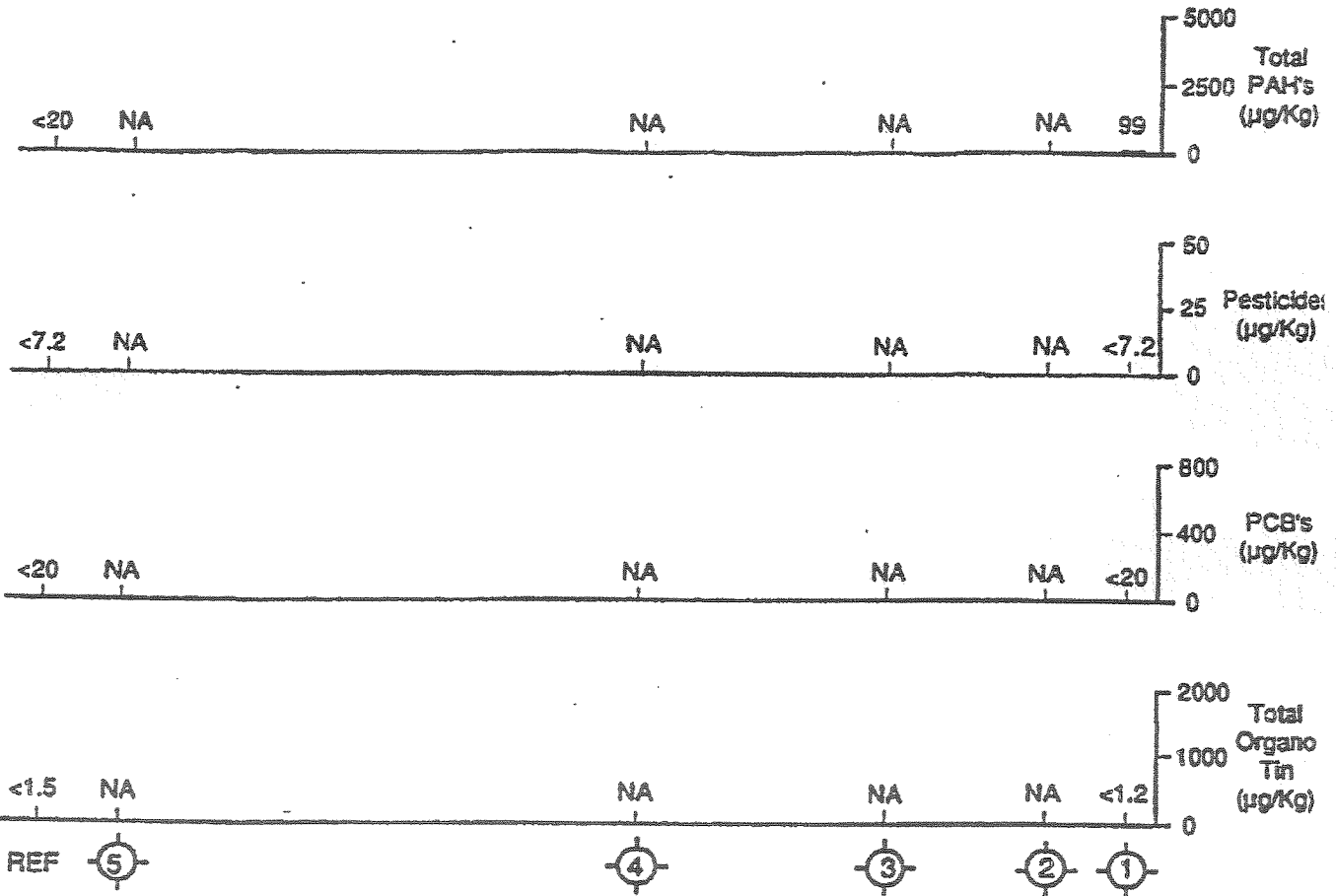


Figure 20d. Contaminant Concentrations for Pier 1 North; Refusal.

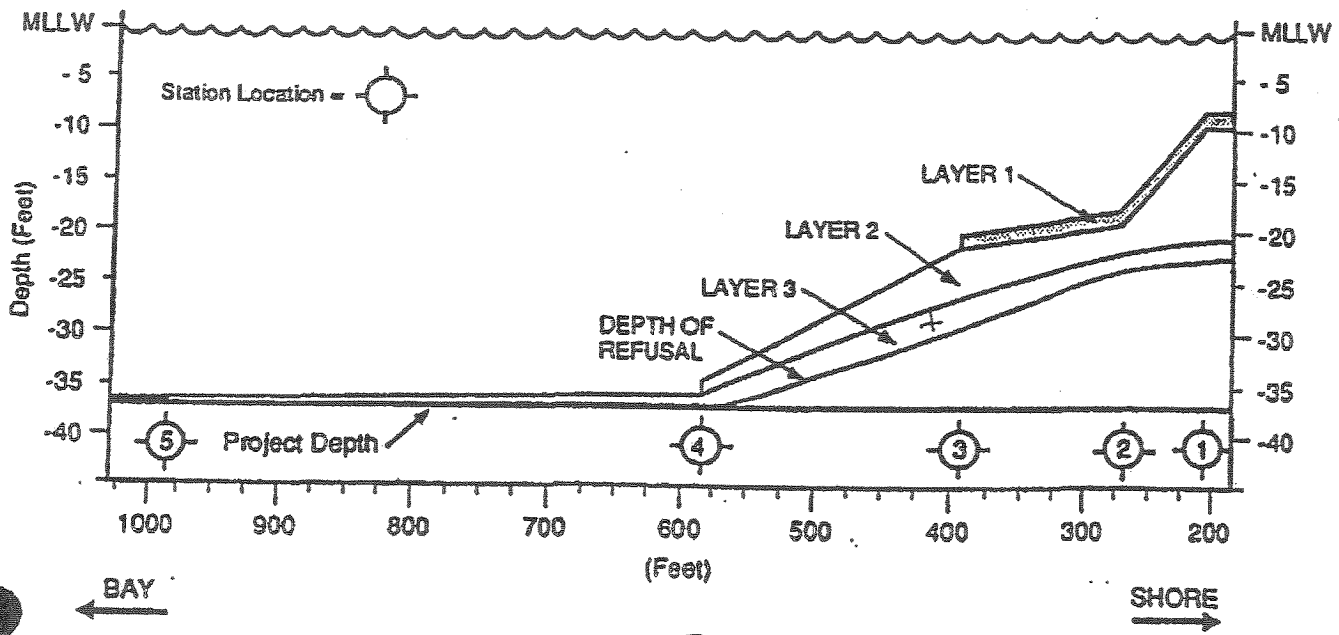
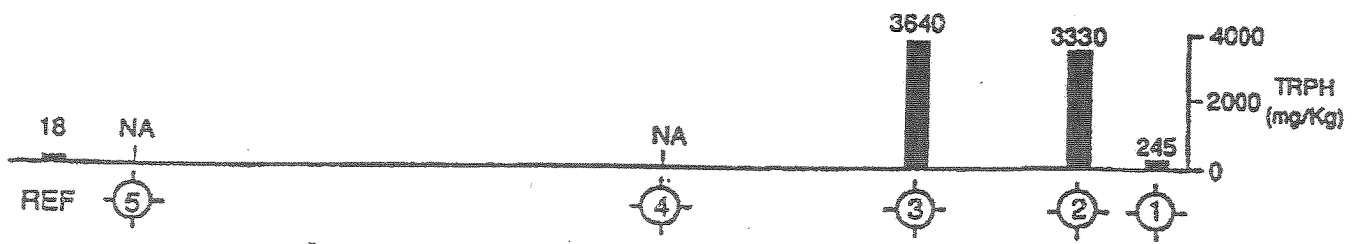
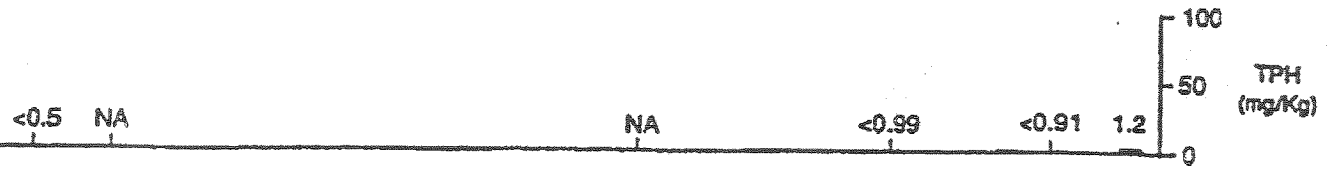
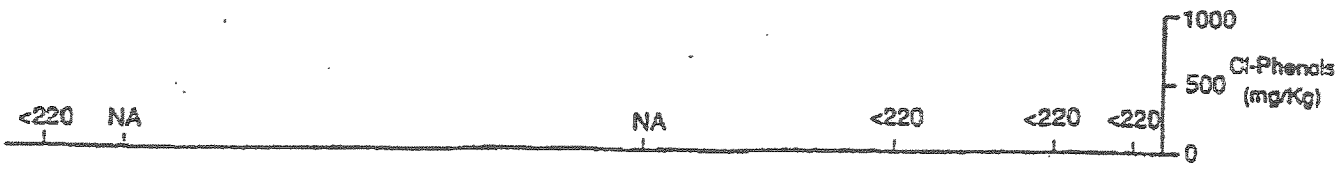


Figure 21a. Contaminant Concentrations for Pier 1 North; Layer 1.

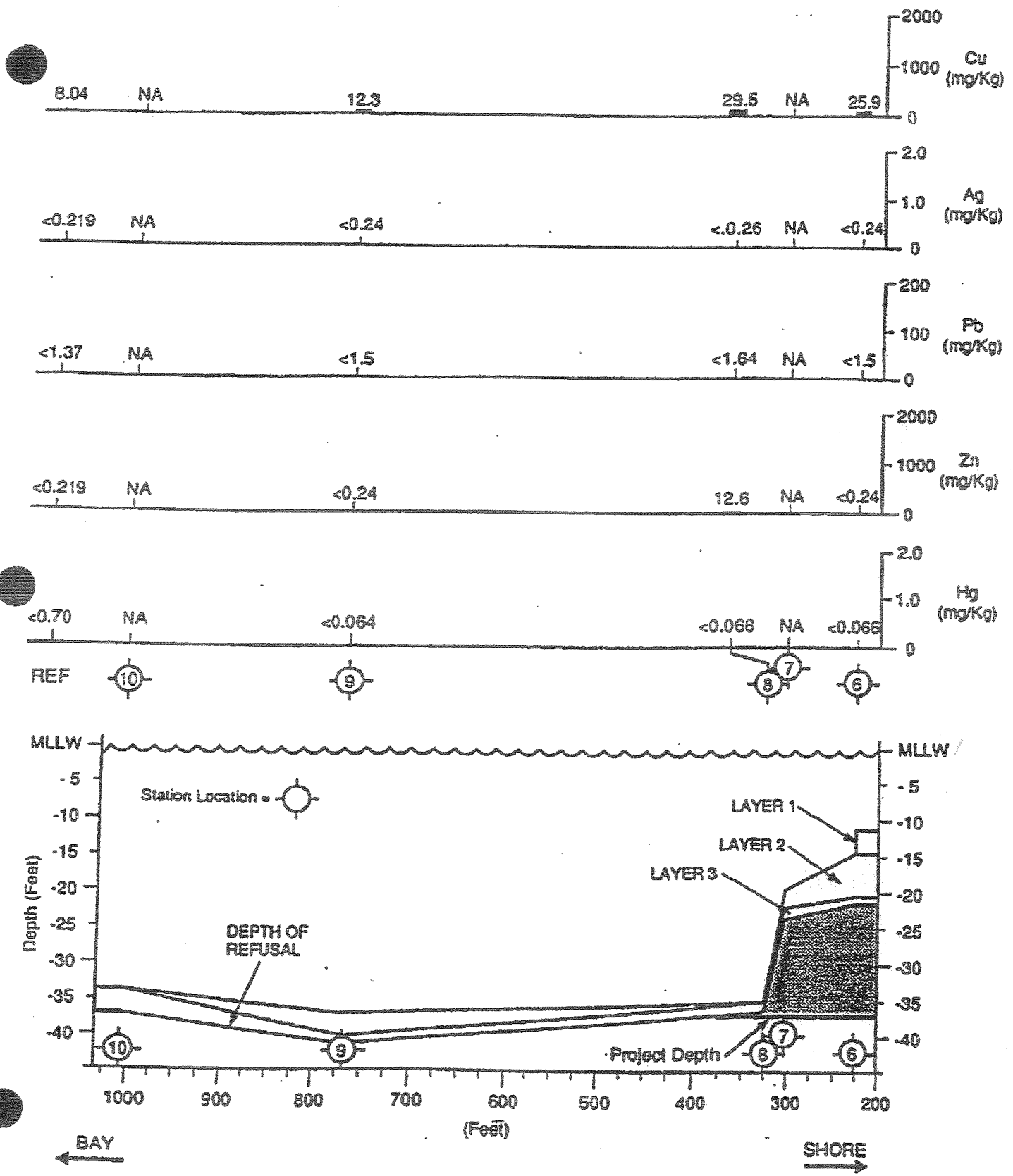


Figure 22d. Contaminant Concentrations for Pier 1 South; Refusal.

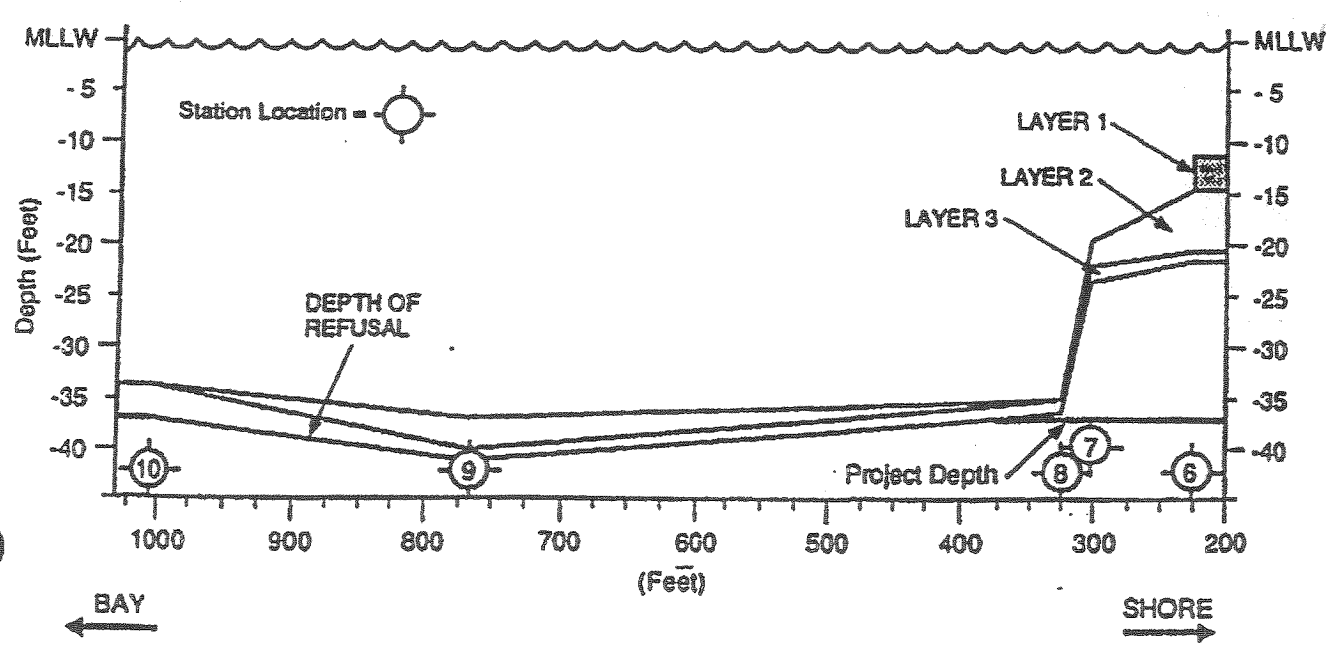
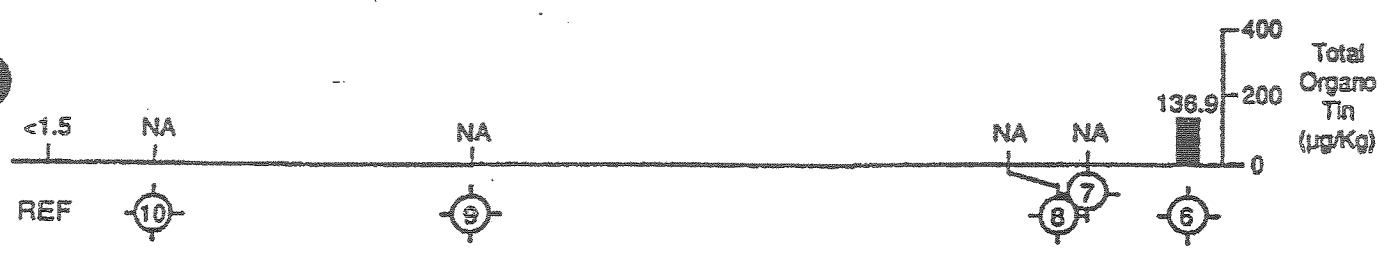
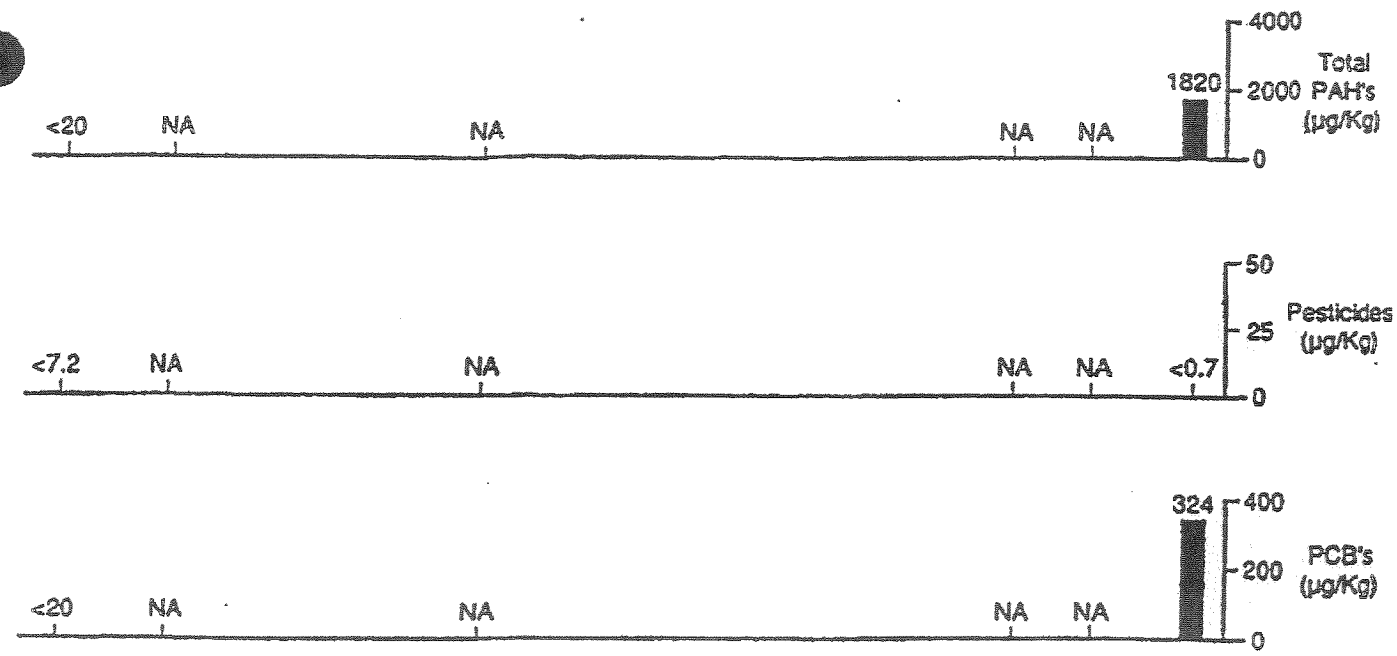


Figure 23a. Contaminant Concentrations for Pier 1 South; Layer 1.

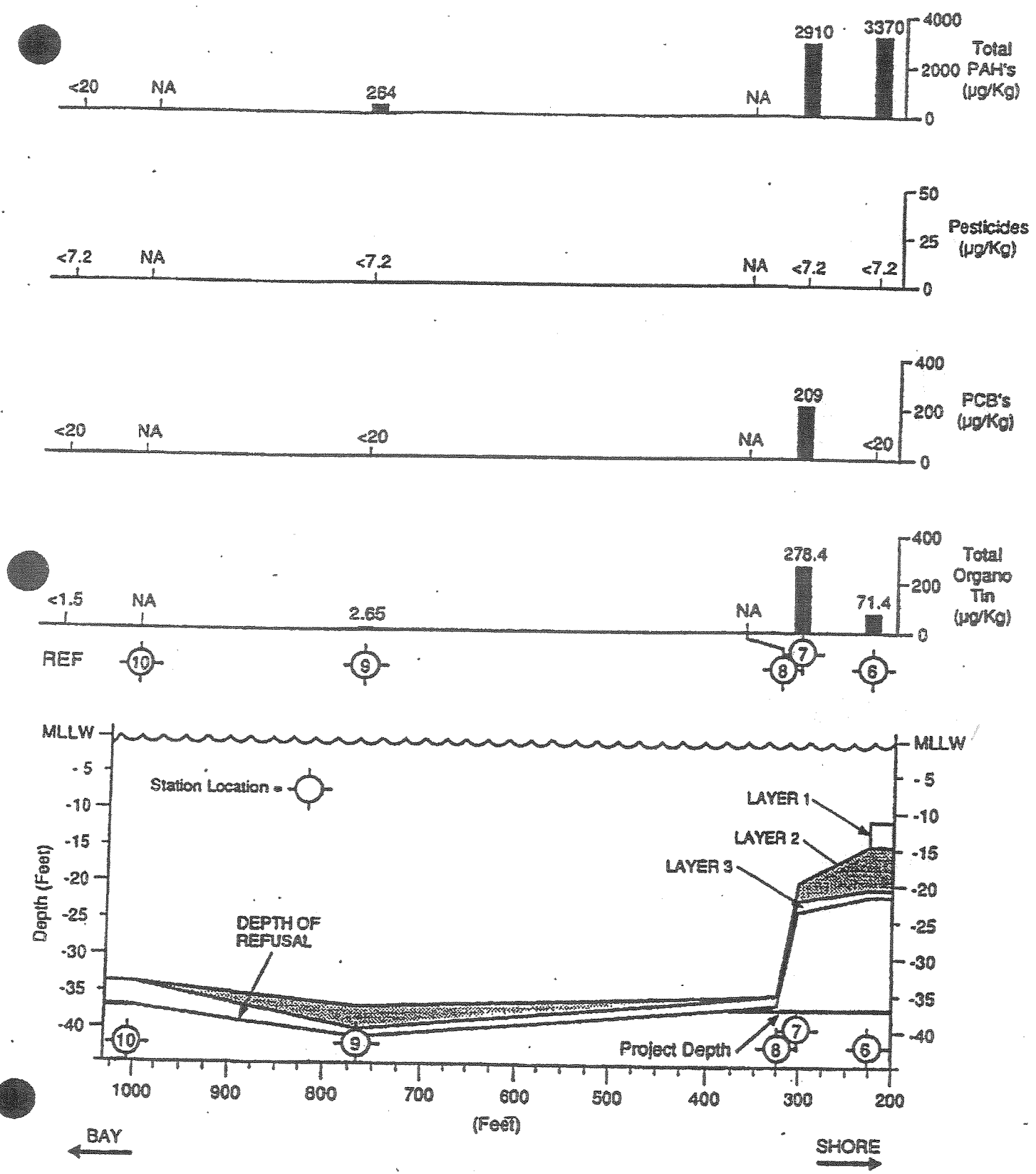


Figure 23b. Contaminant Concentrations for Pier 1 South; Layer 2.

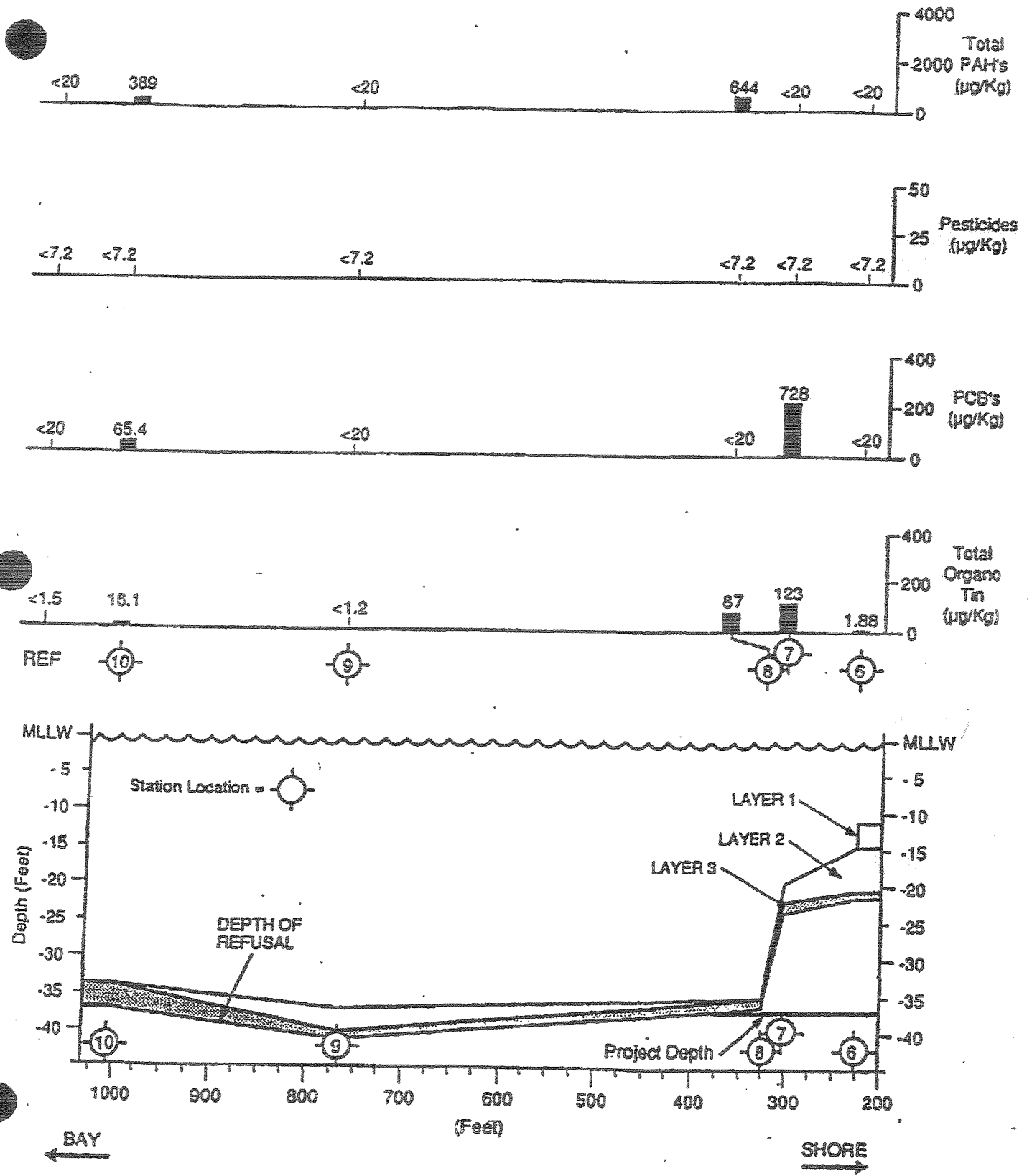


Figure 23c. Contaminant Concentrations for Pier 1 South; Layer 3.

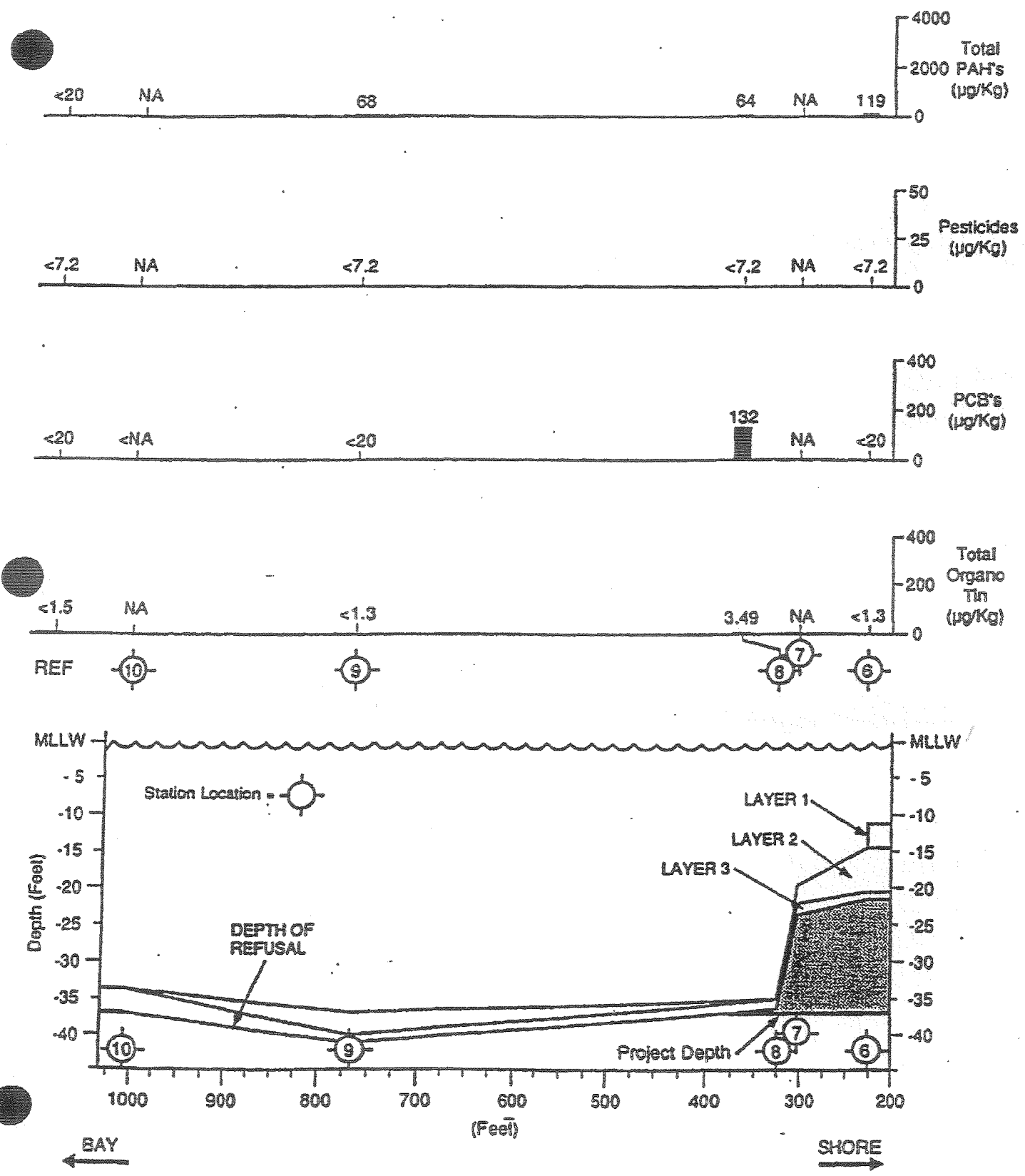


Figure 23d. Contaminant Concentrations for Pier 1 South; Refusal.

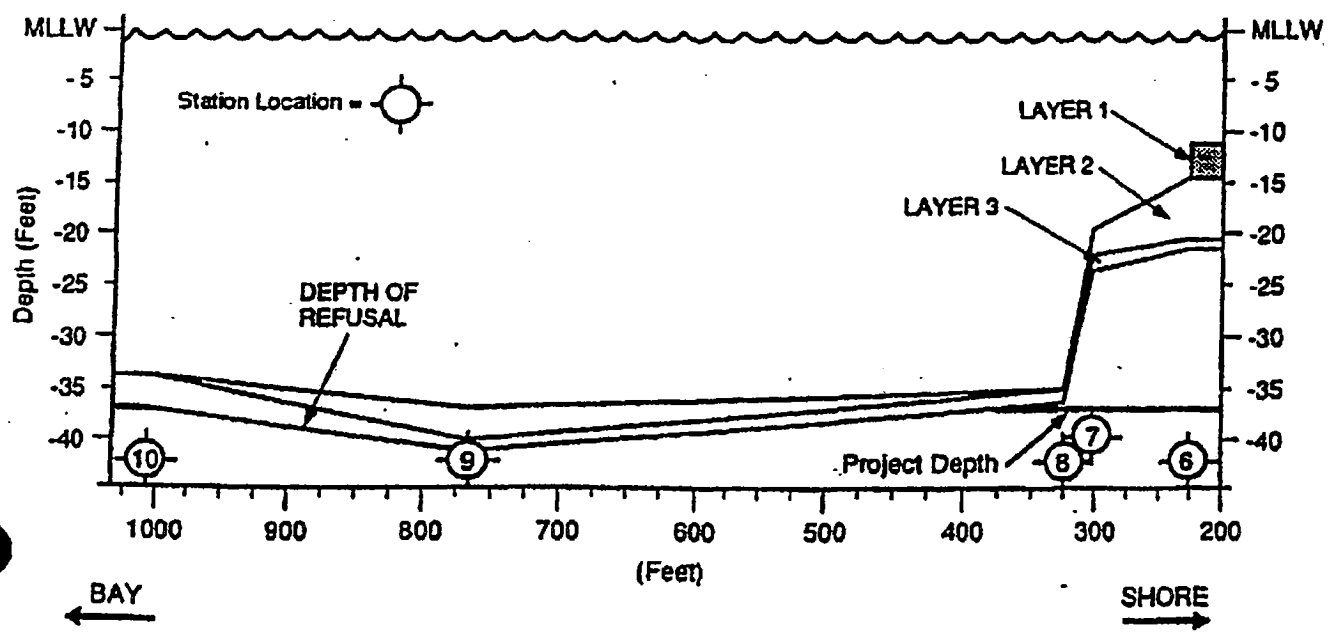
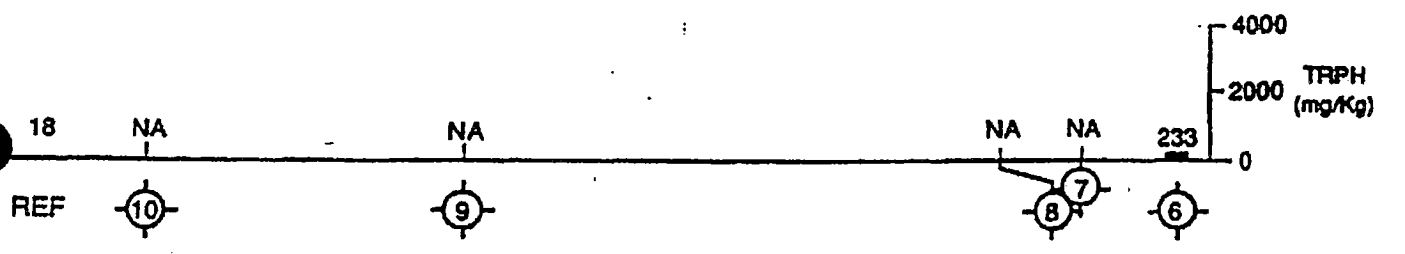
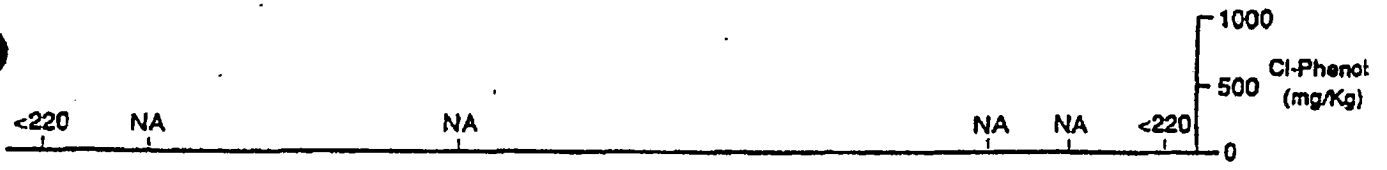


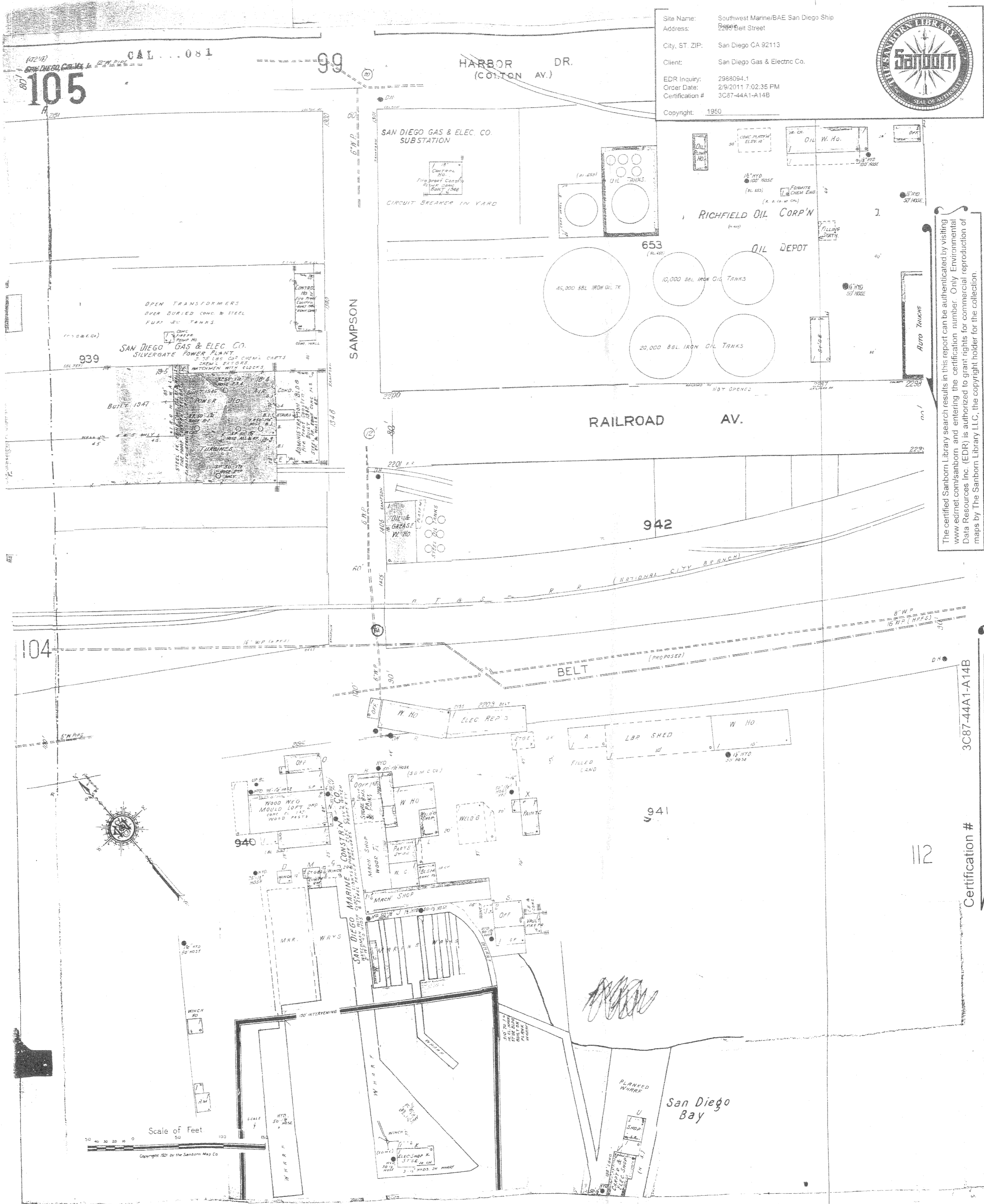
Figure 24a. Contaminant Concentrations for Pier 1 South; Layer 1.

EXHIBIT NO. 1263
Barker

1263

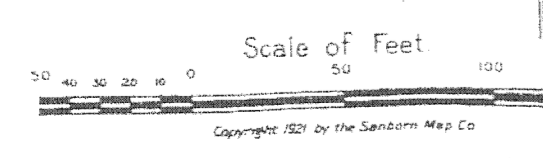
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