University of South Alabama, College of Engineering. September 1992. "Best Management Practices for the Shipbuilding and Repair Industry and for Bridge Maintenance Activities." College of Engineering Report No. 92–2.

Based on the similarities of the facilities included in this sector in terms of industrial activities and significant materials, EPA believes it is appropriate to discuss the potential pollutants at ship and boat building and repairing

facilities as a whole and not subdivide this sector. Therefore, Table R–2 lists data for selected parameters from facilities in the ship and boat building and repairing sector. These data include the eight pollutants that all facilities were required to monitor for under Form 2F, as well as the pollutants that EPA determined may merit further monitoring.

TABLE R-2.—STATISTICS FOR SELECTED POLLUTANTS REPORTED BY SHIP AND BOAT BUILDING OR REPAIRING YARDS SUBMITTING PART II SAMPLING DATA¹ (mg/L)

Pollutant Sample Type	No. of Facilities		No. of Samples		Mean		Minimum		Maximum		Median		95th Percentile		99th Percentile	
	Grab	Comp ⁱⁱ	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp
BOD ₅	29		51	48	4.4	6.3	0.0	0.0	23.0	138.0	2.3	0.8	17.1	25.5	32.6	67.4
COD	29		51	49	73.2	70.0	0.0	0.0	450.0	810.0	53.0	33.0	259.1	264.3	503.9	579.8
Nitrate + Nitrite Nitrogen	29	28	51	49	0.79	0.82	0.00	0.00	6.00	5.00	0.72	0.71	2.36	2.35	4.28	4.22
Total Kjeldahl Nitrogen	29	28	51	49	1.19	2.20	0.00	0.00	3.40	48.00	1.00	0.97	2.57	4.69	3.73	8.67
Oil & Grease	29	N/A	52	N/A	1.0	N/A	0.0	N/A	14.0	N/A	0.0	N/A	5.1	N/A	15.9	N/A
рН	23	N/A	43	N/A	N/A	N/A	4.7	N/A	8.7	N/A	7.3	N/A	8.8	N/A	9.6	N/A
Total Phosphorus	29	28	51	48	0.21	0.86	0.00	0.00	2.20	32.00	0.00	0.06	0.94	1.75	1.98	4.51
Total Suspended Solids	29	27	51	48	92	45	0	0	1200	300	17	10	525	366	2294	1537

ⁱApplications that did not report the units of measurement for the reported values of pollutants were not included in these statistics. Values reported as non-detect or below detection limit were assumed to be 0. ⁱⁱ Composite samples.

3. Options for Controlling Pollutants

The measures commonly implemented to reduce pollutants in storm water discharges from boat and ship building and repairing facilities are generally uncomplicated and simple to implement. Table R–3 identifies Best Management Practices (BMPs) associated with various activities that routinely occur at boat and ship building and repair facilities.

TABLE R–3.—COMMON MANAGEMENT PRACTICES FOR STORM WATER POLLUTION PREVENTION AT SHIP AND BOAT BUILDING AND REPAIRING FACILITIES

Activity	BMPs
Pressure washing	Collect discharge water and remove all visible solids before discharging to a sewer system, or where permitted by an individual NPDES permit, to a drainage system, or receiving water.
	Perform pressure washing only in designated areas where wash water containment can be effectively achieved.
	Use no detergents or additives in the pressure wash water.
	Direct deck drainage to a collection system sump for settling and/or additional treatment.
	Implement diagonal trenches or berms and sumps to contain and collect wash water at marine railways.
	Use solid decking, gutters, and sumps at lift platforms to contain and collect wash water for possible reuse.
Surface preparation, sanding, and paint re-	Enclose, cover, or contain blasting and sanding activities to the maximum extent practical to
moval.	prevent abrasives, dust, and paint chips from reaching storm sewers or receiving water.
	Where feasible, cover drains, trenches, and drainage channels to prevent entry of blasting de-
	bris to the system.
	Prohibit uncontained blasting or sanding activities over open water.
	Prohibit blasting or sanding activities during windy conditions which render containment ineffective.
	Inspect and clean sediment traps to ensure the interception and retention of solids prior to en- tering the drainage system.
	Sweep accessible areas of the drydock to remove debris and spent sandblasting material prior to flooding.
	Collect spent abrasives routinely and store under a cover to await proper disposal.
Painting	Enclose, cover, or contain painting activities to the maximum extent practical to prevent overspray from reaching the receiving water.
	Prohibit uncontained spray painting activities over open water.
	Prohibit spray painting activities during windy conditions which render containment ineffective.
	Mix paints and solvents in designated areas away from drains, ditches, piers, and surface wa- ters, preferably indoors or under a shed.
	Have absorbent and other cleanup items readily available for immediate cleanup of spills.
	Allow empty paint cans to dry before disposal.
	Keep paint and paint thinner away from traffic areas to avoid spills.
	Recycle paint, paint thinner, and solvents.
	Train employees on proper painting and spraying techniques, and use effective spray equip- ment that delivers more paint to the target and less overspray.
Drydock maintenance	Clean and maintain drydock on a regular basis to minimize the potential for pollutants in the storm water runoff.
	Sweep accessible areas of the drydock to remove debris and spent sandblasting material prior to flooding.