

TABLE ES-1

Summary of Conclusions and Recommendations
 No Action / No Further Action Decision Document
 7 Consent Order Sites and 14 PI/PAOC Sites
 Vieques, Puerto Rico

Site Name	Site Description	Site History	Potential Source(s)	Potential Release Mechanism(s)	Site-specific Data Collected	Results of 7-step Decision Analysis	Rationale for No Action / No Further Action Determination
SWMU 2	Fuels Off-loading	Fuel offloaded from barges, pumped to series of above-ground storage tanks (ASTs)	Fuel transfer operations and ASTs	Leaks or spills to ground surface	30 surface soil samples and 15 subsurface soil samples around fuel offloading area, along former fuel transfer pipeline, and in vicinity of all former ASTs	Data suggest potential source areas were sufficiently characterized	Data suggest a localized release at one former AST, but contaminant concentrations (primarily lead) across site do not pose an unacceptable human health or ecological risk or leaching concern for groundwater; average lead concentration is less than PREQB Land Pollution Control Corrective Action Level
SWMU 4	Waste Areas of Building 303 (Camp Garcia)	Storage sheds for spent batteries, waste rags, absorbent material, and grease; catch basin for hydraulic oil and cleaning/degreasing	Materials stored in sheds; catch basin	Leaks or spills to ground surface	12 surface soil samples and 1 subsurface soil sample around all potential source areas; 1 regional groundwater sample	Data suggest potential source area was sufficiently characterized	Data suggest there has not been a CERCLA-related release or, if a release occurred, it has not resulted in soil or groundwater contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
SWMU 6/7	Waste Oil and Paint Accumulation Areas	Concrete pad and caged area used to stage waste oil in 55-gallon drums and paint in small containers	Drums and small containers of waste oil and paint	Leaks or spills to concrete surface; runoff to ground surface	16 surface soil samples and 6 subsurface soil samples around entire perimeter of concrete pad	Data suggest potential source area was sufficiently characterized	Data suggest there has not been a CERCLA-related release that has resulted in soil or groundwater contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
SWMU 10	Sewage Treatment Lagoons	Four historically unlined lagoons for Camp Garcia sanitary sewage treatment from 1950s to 2000 (lined in 1974); treated effluent discharged to land and/or sea until 1974; no discharge after 1974	Sewage treatment lagoons	Discharge to ground surface; leaching from lagoons into soil and/or groundwater	20 co-located surface soil and subsurface soil samples within lagoons; 5 monitoring wells (4 within and 1 outside lagoons); 8 additional surface soil samples for thallium analysis only	Data suggest potential source area was sufficiently characterized	Data suggest there has not been a CERCLA-related release or, if a release occurred, it has not resulted in soil or groundwater contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
AOC A	Diesel Fuel Fill Pipe Area	15,000-gallon diesel fuel underground storage tank (UST) at OP-1; first one removed in 1997; second removed in 2003	UST and associated piping	Leaks or spills to ground surface and to subsurface soil	10 confirmatory subsurface soil samples around and beneath UST and associated piping following removal; additional soil removal and 26 confirmatory soil samples during ESI	Data suggest potential source area was sufficiently characterized	Following tank, associated piping, and adjacent soil removal, current total petroleum hydrocarbon (TPH) concentrations are acceptable relative to the PREQB Land Pollution Control Corrective Action Level

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AOC G	Pump Station and Chlorination Building	Building used for chlorination and pumping of sewage being treated in lagoons (SWMU 10)	Chlorine contact chamber; piping; pump maintenance activities	Spills or leaks from chlorine contact chamber and/or associated piping to ground surface; spills or other discharge of pump maintenance fluids outside building	7 surface soil and 2 subsurface soil samples around building and chlorine contact chamber	Data suggest potential source areas were sufficiently characterized	Data suggest there has not been a CERCLA-related release that has resulted in soil contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
PI 5	Former Airfield and Associated Ditches	Airfield, fire department, temporary tents	Airfield staining	Runoff from stained areas into ditches and transport in ephemeral streams	4 co-located surface soil and subsurface soil samples and 4 additional surface soil samples in former stained areas and depositional areas in ditches and ephemeral streams	Data suggest potential source areas were sufficiently characterized	Data suggest there has not been a CERCLA-related release or, if a release occurred, it has not resulted in soil contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
PI 6	Former PCB Storage Pad and Vehicle Wash Pad	Fresh water storage, UST, vehicle washing, PCB storage	PCB storage on pad; vehicle washing activities	Runoff from vehicle wash pad, runoff from PCB storage pad to ground surface and sump	6 wipe samples on PCB concrete storage pad, 2 co-located surface and subsurface soil samples adjacent to PCB storage pad, and 1 surface soil sample within concrete pad sump; 3 surface soil samples near UST; 1 co-located surface and subsurface soil sample adjacent to vehicle wash pad	Data suggest potential source areas were sufficiently characterized	Data associated with PCB storage pad suggest a CERCLA-related release of PCBs has not occurred. Data associated with UST and vehicle wash pad suggest there has not been a CERCLA-related release or, if a release occurred, it has not resulted in contamination of soil at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
PI 8	Former Motor Pool Maintenance Area	Motor pool maintenance area, car wash, oil drum storage and disposal area, asphalt emulsion drum storage area, storage area for hazardous materials and petroleum products	Vehicle maintenance; drums, hazardous materials, and petroleum products	Spills or leaks to ground	Magnetic survey to look for buried drums; 9 co-located surface and subsurface soil samples and 4 additional surface soil samples in most likely areas of release; 1 surface soil sample in drainage ditch where runoff from site is most likely	Data suggest potential source areas were sufficiently characterized	Data suggest there has not been a CERCLA-related release that has resulted in soil contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
PI 10	Former Wastewater Leach Field	Former sludge drying lagoons (leach field) for former wastewater treatment plant	Wastewater sludge	Leaching from sludge	3 co-located surface soil and subsurface soil samples and 3 additional surface soil samples within and adjacent to former lagoons	Data suggest potential source areas were sufficiently characterized	Data suggest there has not been a CERCLA-related release or, if a release occurred, it has not resulted in soil contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater

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PAOC I	Former Power Plant and Mechanics Shop	Building formerly used as a power plant and mechanics shop	Power plant and mechanic activities	Discharge through building pipe penetrations or via doors	5 co-located surface soil and subsurface soil samples; one each adjacent to 3 pipe penetrations and 2 doors	Data suggest potential source areas were sufficiently characterized	Data suggest there has not been a CERCLA-related release or, if a release occurred, it has not resulted in soil contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
PAOC J	Former Vehicle Maintenance Area	Vehicle maintenance; facility demolished prior to 1980	Vehicle maintenance operations	Spills or leaks to ground surface	6 co-located surface soil and subsurface soil samples across former vehicle maintenance area; 1 regional groundwater sample	Data suggest potential source area was sufficiently sampled	Data suggest there has not been a CERCLA-related release or, if a release occurred, it has not resulted in soil or groundwater contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
PAOC K	Former Wash Rack	Vehicle washing on a rack; facility demolished prior to 1980	Vehicle washing operations	Runoff of vehicle wash fluids to ground surface	5 co-located surface soil and subsurface soil samples at former wash rack location; 1 regional groundwater sample	Data suggest potential source area was sufficiently sampled	Data suggest there has not been a CERCLA-related release or, if a release occurred, it has not resulted in soil or groundwater contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
PAOC L	Former Paint and Transformer Storage Area	Small, single room concrete block building used for storage of paints and transformers	Containers of paints; transformers	Spills or leaks onto concrete floor and tracked outside; spills or leaks outside building	4 co-located surface soil and subsurface soil samples and 1 monitoring well around building during SI; 8 surface soil samples and 4 confirmatory subsurface soil samples following soil removal	Data suggest potential source areas were sufficiently characterized	Data suggest sufficient soil contaminated with pesticides was removed and that residual pesticide concentrations are consistent with concentrations attributable to normal pesticide use, not a CERCLA-related release
PAOC M	Former Fuel Facility	Former dispatch office, sleeping quarters, fuel facility	Fuel-related materials, if historically present	Spills or leaks to ground surface	4 continuous soil borings around footprint of former building for visual, odor, or PID evidence of contamination	No visual, odor, or PID evidence of contamination detected; no sampling required	Visual, odor, and PID evidence suggests a CERCLA-related release did not occur
PAOC N	Former Fuel Farm and Filling Station	3 ASTs present from 1985 through 1992; two-compartment AST (gas and diesel) installed in 2000	ASTs	Spills or leaks onto ground surface	Geophysical survey to determine if underground fuel pipeline is present; 3 co-located surface soil and subsurface soil samples around the former ASTs; 1 co-located surface soil and subsurface soil sample and 1 monitoring well at the former fuel building location	Data suggest potential source area was sufficiently sampled	Geophysical survey confirmed no underground fuel pipeline present; data suggest there has not been a CERCLA-related release that has resulted in soil or groundwater contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater

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PAOC O	Former Boiler Room in Heat Plant Building 238	Boiler room in building constructed in 1953 and demolished in 1989	Boiler	Spills or leaks to ground surface	2 co-located surface and subsurface soil samples within footprint of former building	Data suggest potential source area was sufficiently sampled	Data suggest there has not been a CERCLA-related release that has resulted in soil contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
PAOC P	Former Water Treatment Pumphouse	Water treatment pumphouse in building constructed in 1953 and demolished in 1989. Mobile generator removed during SI.	Mobile generator	Leaks or spills to ground surface	1 co-located surface and subsurface soil sample beneath mobile generator	Data suggest potential source area was sufficiently sampled	Mobile generator removal has eliminated the potential future source of contamination; data suggest there has not been a CERCLA-related release that has resulted in soil contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
PAOC S	Former POL Pipeline and Power Plant	Two physically separate areas - underground fuel transfer pipeline from SWMU 2 to airfield (removed in 1984); former power plant in Camp Garcia	Former pipeline; power plant operations	Spills or leaks to ground surface; release also to subsurface from pipeline	Geophysical survey to determine if underground fuel pipeline or UST is present; 14 co-located surface soil and subsurface soil samples along former pipeline; 2 surface soil samples between pipeline and salt flat; 5 co-located surface soil and subsurface soil samples and 1 monitoring well at the former power plant location	Data suggest potential source area was sufficiently sampled	Geophysical survey confirmed no underground fuel pipeline or UST present; data suggest there has not been a CERCLA-related release that has resulted in soil or groundwater contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater
PAOC X	Debris Area in Ephemeral Stream	Automobile, tires, scrap metal, and construction-type debris disposed in and adjacent to an ephemeral stream. Debris removed during SI.	Miscellaneous debris	Leaching of constituents from debris to soil	4 surface soil samples in vicinity of debris; 7 confirmatory surface soil samples and 4 confirmatory subsurface soil samples beneath debris following removal	Data suggest potential source areas were sufficiently characterized	Debris removal has eliminated the potential future source of contamination; data suggest there has not been a CERCLA-related release that has resulted in soil contamination at concentrations that would pose a potentially unacceptable risk to human or ecological receptors or leaching concern for groundwater