CALIFORNIA ENVIRONMENTAL QUALITY ACT
INITIAL STUDY

The Department of Toxic Substances Control (DTSC) has completed the following document for this project in accordance with the California Environmental Quality Act (CEQA) [Pub. Resources Code, div. 13, § 21000 et seq] and accompanying Guidelines [Cal. Code Regs., tit. 14, § 15000 et seq].

PROJECT TITLE: Issuance of Post-Closure Permit for Waste Water Treatment Units - East Basin, West Basin, Emergency Basin and Ponds A, B, and C at DuPont Oakley Site; U.S. EPA ID. NO. CAD009151671		CALSTARS CODING: Site Code: 200165 Work Phase: 48 PCA: 22120
PROJECT ADDRESS: 6000 Bridgehead Road	CITY: Oakley	COUNTY: Contra Costa
PROJECT SPONSOR: DuPont Corporate Remediation Group	CONTACT: Charles Orwig	PHONE: (281) 586-5676

APPROVAL ACTION UNDER CONSIDERATION BY DTSC:

☐ Initial Permit Issuance ☐ Permit Renewal ☐ Permit Modification ☐ Closure Plan
☐ Removal Action Workplan ☐ Remedial Action Plan ☐ Interim Removal ☐ Regulations
☒ Other (specify): Post-Closure Permit

STATUTORY AUTHORITY:

☒ California H&SC, Chap. 6.5 ☐ California H&SC, Chap. 6.8 ☐ Other (specify):

DTSC PROGRAM/ ADDRESS: 8800 Cal Center Drive Sacramento, California 95826	CONTACT: Peter Ruttan	PHONE: (916) 255-3630

PROJECT DESCRIPTION:

The Department of Toxic Substances Control (DTSC) and E.I. du Pont de Nemours and Company (DuPont or Permittee) entered into a Corrective Action Consent Agreement (CACA) for the Du Pont Antioch Works facility at 6000 Bridgehead Road in Oakley, California (aka the Facility, Dupont Oakley Site or the Site), effective June 17, 2003 (HWCA P2-02/03-005). The project is the proposed issuance by DTSC, in accordance with California Health and Safety Code, Chapter 6.5, Section 25100 et seq., and the referenced CACA, of a Resource Conservation and Recovery Act (RCRA) Part A and Part B Hazardous Waste Post-Closure Permit (Permit) to DuPont for six waste management units (or "units" unless specifically described).

The units include three concrete and polyethylene-lined ponds three ponds (Ponds A, B, and C) and unlined basins (East Basin, West Basin, and Emergency Basin) that are no longer used for the treatment or storage of hazardous wastes. The ponds and basins were used to treat and store wastewater that was generated at the Site when it was in operation. All six of the units were removed from service in accordance with a Closure Plan dated June 20, 1983, which was approved by the California Regional Water Quality Control Board-Central Valley Region (CRWQCB) and Department of Health Services (DHS), DTSC's predecessor agency. The Closure Plan included: removing waste materials from all six units for reprocessing or off-site disposal at a permitted hazardous waste landfill; filling five of the units with clean soil; and, leaving one unit (the West Basin functional for the purpose of receiving non-RCRA wastewater prior to discharge into the San Joaquin River under a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permit expired in 2001 and piping to and from the West Basin has been sealed, but the unit still collects rainwater.

The proposed Permit would require regular inspection and maintenance of the units and include a special condition requiring backfilling the West Basin with clean soil. Groundwater and surface water monitoring programs were developed in cooperation with DTSC as part of the CACA. The current groundwater and surface water monitoring programs fulfill the requirements of California Code of Regulations, title 22, Chapter 14 section 66264.90 and are both comprehensive and protective of human health and the environment. The proposed Permit requires scheduled inspections of the integrity of the soil cover over all of the units. The Permittee must also

cooperate with DTSC in preparation and recording of a covenant to restrict use of the property. The covenant will place restrictions on groundwater extraction and building construction and/or occupancy. The Permittee shall sign and record the covenant within thirty (30)-days after receiving written approval of the covenant form and content from DTSC.

Project activities are expected to commence in Fall 2011 and continue through the Post-Closure Permit's term, which is 10 years. Before the proposed Permit expires, DuPont may apply to DTSC for another post-closure permit.

Background:

The approximate 378-acre DuPont Oakley Site was a chemical manufacturing plant that produced chlorofluorocarbons (CFCs), fuel-additive anti-knock compounds (AKCs), and titanium dioxide (TiO2). The location of the DuPont Oakley Facility and the area of the former surface impoundments subject to the Permit are shown on Figure 1 below. Production of CFCs began in 1956; AKC production was added in 1957; and TiO2 production was added in 1963. Production of all three product lines has been eliminated, beginning with AKC manufacturing in 1981, CFC manufacturing in 1995, and TiO2 manufacturing in November 1997, followed by a general shutdown of all TiO2 and CFC blending operations on November 30, 1998. All manufacturing facilities at the Site have since been demolished.

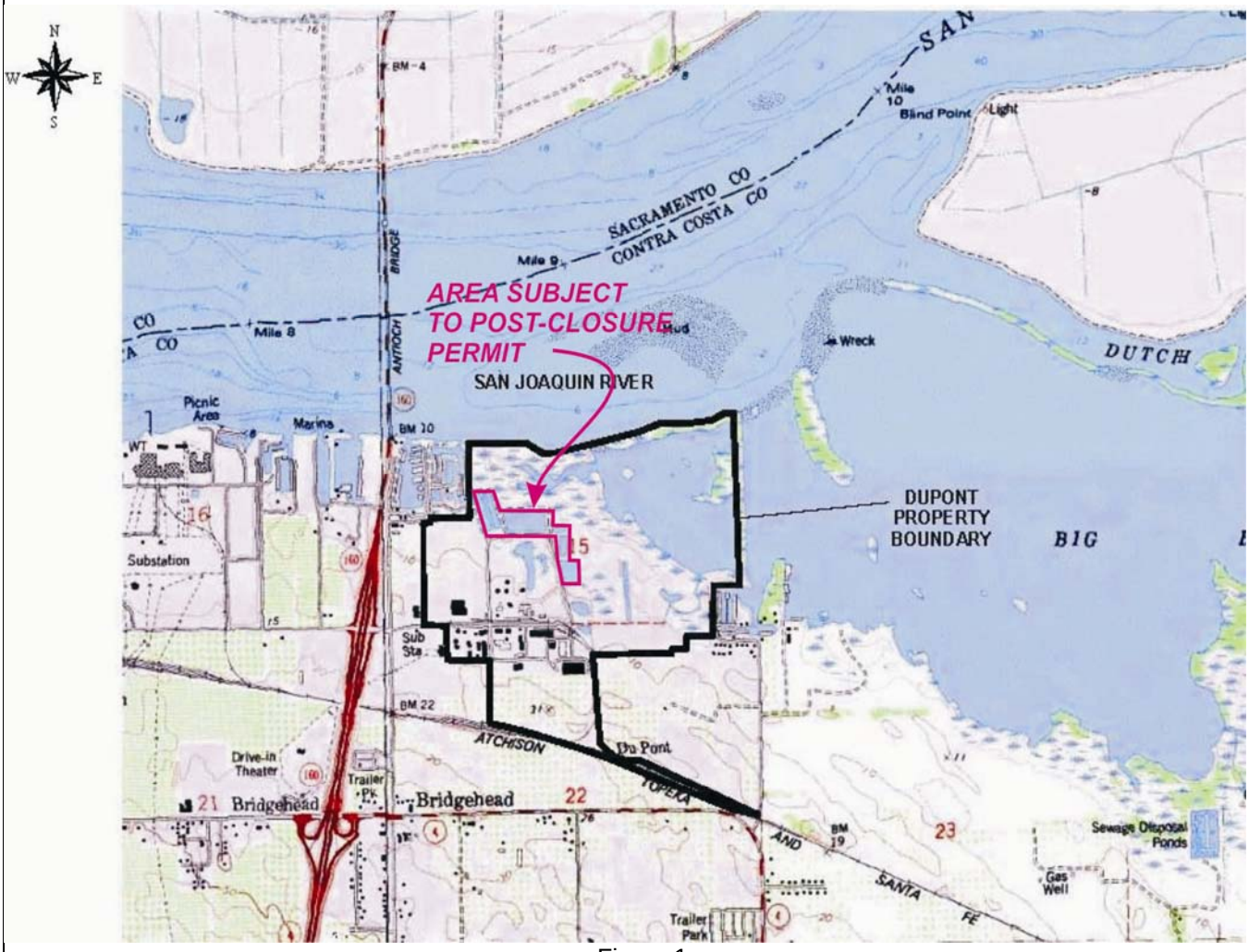

Figure 1

The units were removed from service in accordance with the Closure Plan dated June 20, 1983, and approved by the California Regional Water Quality Control Board-Central Valley Region (CRWQCB) and DHS. The Closure Plan included contaminated soil and/or bottom sludge removal. Since the mid 1980's it has been determined that the regulations that govern RCRA unit closure (Cal. Code Regs., tit. 22, §§ 66265.228 and 66265.258) require removal of contaminated soils and contaminated groundwater that exceeds beneficial use, protective water quality

limits, or maximum contaminant levels. Because groundwater remains contaminated due to past releases from the units, the units cannot be considered "clean closed" and are subject to post-closure care requirements. The ponds and basins are shown on Figure 2.

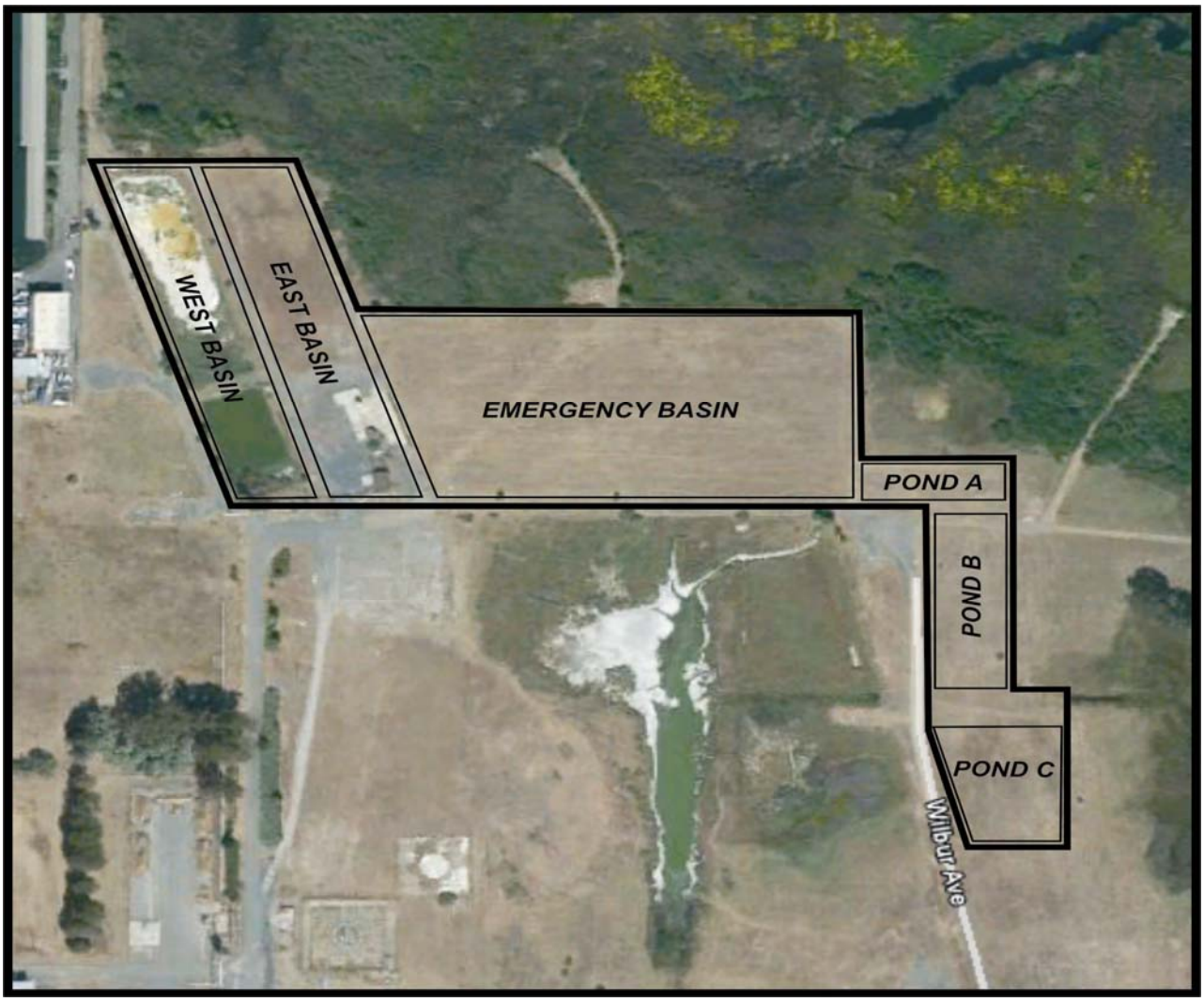

Figure 2

Ponds A, B, and C

Three tetraethyl lead (TEL) ponds (Ponds A, B, and C or Ponds) were built in the 1970s to store sludge from the AKC manufacturing process. The Ponds were used to settle out solids from the sludge generated by the wastewater clarification process. These Ponds were lined with two layers of 6-mil-thick polyethylene and overlaid with concrete slabs connected by neoprene expansion joints and coated with a layer of gunite (a mixture of cement, sand, and water). Past inspections indicated that cracks were observed in the gunite in all ponds during routine maintenance, and a small hole was found in the gunite in Pond B. In 1983, the Ponds were dredged to remove all solids. Sludge was removed from the units, reprocessed, or sent off-site for disposal. No "potholes" or dislodged pieces of the concrete lining were encountered. The concrete slabs and polyethylene liners were left in place. After removal of the sludge, the Ponds were backfilled with clean fill. Confirmatory samples were not collected and soils from beneath the Ponds were not excavated. The Ponds were removed from service in accordance with the 1983 Closure Plan approved by the CVRWQB and DHS. An independent registered civil engineer provided oversight for the activities outlined in the Closure Plan that also included the East, West, and Emergency Basins. The CRWQCB and DHS confirmed in letters dated July 8, 1985 and November 7, 1985 that the implementation of the Closure Plan had been completed. The Contaminants of Potential Concern (COPCs) associated with the Ponds are those from the AKC manufacturing process and include organolead, inorganic lead, 1,2-Dichloroethane, and 1,2-Dibromoethane. Soil sampling beneath these units is not anticipated at this time; soil contamination was addressed by the removal activities performed in 1983. The status of these units as

groundwater contaminant sources is being evaluated as part of the ongoing Site characterization efforts.

West, East, and Emergency Basins

The East, West, and Emergency Basins (Basins) were built in the early 1960s as unlined earthen basins for disposal of the various wastewater streams generated by the manufacturing facilities. The Basins had clay-lined sides covered by riprap. Wastes from all three processes (CFC, anti-knock compound, and pigments production [TiO2]) ultimately discharged to the river through this system. The East and West Basins discharged directly to the San Joaquin River and were permitted through a National Pollutant Discharge Elimination System (NPDES) outfall governed by State and federal regulations. The Emergency Basin was a holding area for concentrated process upsets, which were then incrementally blended with other wastewater streams to reduce concentration limits to acceptable levels before discharge through the outfall.

The East and Emergency Basins received wastewater from all three manufacturing processes, which potentially contained COPCs from each of the manufacturing areas. In the 1980s the Basins were removed from service by excavating sludge and contaminated soils and backfilling with clean soil. A total of 18,100 cubic yards of sludge and contaminated soils was excavated and disposed off-site. Waste and contaminated soil were removed to meet a cleanup standard of 1000 mg/kg total lead and 13 mg/kg organolead. Following excavation, 50 tons of agricultural lime was applied to the Emergency Basin, after which both basins were backfilled with 50,000 cubic yards of clean fill. In all, 11,230 cubic yards of contaminated soil beneath the sludge was removed and disposed off-site. These Basins were removed from service in accordance with the Closure Plan dated 1983, which, as previously mentioned, was approved as complete by the CVRWQB and DHS as reflected in the confirmation letters. COPCs for these units include volatile organic compounds (VOCs), kerosene, organolead, arsenic, barium, chromium, cobalt, copper, fluoride, inorganic lead, iron, manganese, nickel, thallium, vanadium, polychlorinated biphenyls (PCBs), hexachlorobenzene, pentachlorobenzene, and dioxins and furans. A former groundwater extraction and treatment facility was located on the southerly portion of the former East Basin. DuPont has removed the extraction/treatment equipment from this area.

The West Basin also received wastewater from all three manufacturing processes and potentially had COPCs from each of the manufacturing areas. This Basin was closed in the mid 1980's according to the 1983 Closure Plan approved by the CVRWQB and the DHS, which included excavating sludge and contaminated soils from the basin to meet a closure standard of 1000 mg/kg total lead and 13 mg/kg organolead. This Basin was also removed from service in accordance with the 1983 Closure Plan. The West Basin was renamed the Holding Basin and was put back into use as part of the Site's wastewater management system under a NPDES permit. The NPDES permit expired in 2001. Piping to and from the West Basin has been sealed, but the unit still receives rainwater. COPCs for this unit include VOCs, kerosene, organolead, inorganic lead, antimony, arsenic, fluoride, and potentially, barium, chromium, cobalt, copper, iron, manganese, nickel, thallium, vanadium, PCBs, hexachlorobenzene, pentachlorobenzene, dioxins and furans.

Environmental Setting

The DuPont Oakley Site is underlain by unconsolidated sediments that alternate between thick coarse-grained materials and intervening thinner fine-grained layers. This interval ranges in thickness from approximately 110 to 130 feet across the Site and lies directly above the Montezuma Formation, a several hundred foot thick clay layer, forming the base of this interval. The coarse-grained layers above the Montezuma Formation are comprised of silty sand, sand, and gravelly sand that generally become coarser with depth. The intervening fine-grained layers, where present, are comprised primarily of silts and clays that act locally as aquitards that inhibit downward migration of Site COPCs. Most of the sediments overlying the Montezuma Formation are believed to reflect past alluvial fan and fluvial depositional environments formerly active at the Site. On a regional scale, this unconsolidated alluvial unit could be considered the "uppermost aquifer," but on the scale of the Site, the less permeable silt and clay layers divide the sediments into several local aquifers. The uppermost layer is comprised of fine grained sands believed to be dune sands indicating that winds at the Site have reworked surface sediments over time. These dune sands have migrated from upwind locations and are present to depths up to 15 feet below the surface across most of the Oakley Site. Two clay and silt layers are present at depths of approximately 10 to 20 feet and 40 to 65 feet below ground surface. These two intervals essentially subdivide the overall thicker clastic interval into smaller vertical intervals of unequal thicknesses generally designated as the Surficial, Upper, and Lower Aquifers. Thinner and less laterally extensive clay and silt layers are also present within each of these thinner clastic intervals, which, in the Lower Aquifer, have given rise to the L1, L2 and L3 interval designations. The Lower L1 and L2 intervals are combined for Site evaluations into a single Lower (L1/L2) zone due to their general connectivity and the similarity in the contaminant concentrations observed within them.

PROJECT ACTIVITIES:

General

The proposed Permit requires maintenance and regular inspections of the intergrity of the soil cover for the units. The units lie within plumes commingled from multiple sources associated with upgradient manfuacturing activities. A number of groundwater monitoring wells have already been installed immediately downgradient of the units and are regularly sampled and analyzed for chemical contamination. Surface water monitoring is performed regulary at locations within adjacent surface water bodies (San Joaquin River, Lauritzen Yacht Harbor and Little Break). Groundwater and surface water monitoring are performed in accordance with the requirements of a CACA (HWCA P2-02/03-005). A special condition of the Permit also requires backfilling the West Basin with clean fill. Additionally, the Permit requires the Permittee to record a land use covenant within 30 days after DTSC approves the from and content of the covenant. The covenant will place restrictions on groundwater extraction and building construction and/or occupancy. Project activities are expected to commence in Summer 2011 and continue through the Post-Closure Permit term.

Backfilling of the West Basin

The proposed Permit requires the West Basin to be backfilled with clean soils. The West Basin backfilling activities are detailed in a document titled *"SWMU 4.2 (West Basin) Closure Plan",* which is dated March 25, 2011 and located in Appendix C of the approved Post-Closure Permit Application. The backfilling activities will begin with the removal of standing rainwater in the unit. The water will be moved to the opposite end of the basin from the working face. As the West Basin bottom is exposed and construction proceeds, any water resulting from rainfall or possible infiltration from the natural formation will be managed within the West Basin, collected from a low area or sump. The water may be allowed to evaporate or may be transferred, stored and disposed of in accordance with the Project-Specific Waste Management Plan. Backfill will consist of approximately 17,500 loose cubic yards of native soils that will be analytically tested according to a plan approved by the DTSC before placement as fill. The backfill will be placed loosely to the final surface elevation to promote optimal vegetative growth over the surface of the unit, which will be used in the future as public green space. The Permit requires a cover to be constructed that will meet the Site needs as a platform for future use as a publicly-available green space. The cover will be constructed slightly larger in area than the footprint of the existing West Basin. The dimensions are approximately 100 feet by 600 feet. The Permit also includes detailed inspection activities following the backfilling activities. The West Basin surface cover must be inspected, at a minimum annually throughout the post-closure period, by a qualified engineer registered in California. Inspection will also occur following large rain events and earthquakes to determine if subsidence, settling, erosion or abrasion is occurring and to confirm adequate vegetative cover. The soil cover for the West Basin must be constructed in accordance with applicable subsections of California Code of Regulations, title 22, section 66264.228 (for RCRA regulated covers), with the exception of various subsections due to the fact that all wastes and waste residues have been removed from the unit, contaminated subsoil remaining beneath the unit is within the saturated zone or beneath the groundwater table, and no leachate is being produced within the unit since all wastes and waste residues have been removed. The prevention of downward flow of water through the cover is of no value since all waste has been removed from the unit and contaminated soil is within the saturated zone or below the groundwater table. The Permit will require that the backfilling activities associated with the West Basin shall begin no later than eighteen (18) months following the effective date of the Permit.

The sequence of backfilling activities for the West Basin will include the following:

1) Standing water in the West Basin will be moved to the opposite end of the unit from the working face. As the West Basin bottom is exposed and construction proceeds, any water resulting from rainfall or possible infiltration from the natural formation will be managed within the unit, collected from a low area or sump. The water will be allowed to evaporate or be handled in accordance with the DuPont Oakley Site's approved Waste Management Plan. Run-on into the West Basin will be prevented during backfilling activities by use of berms.

2) The intermediate berm between the two sections of the West Basin will be left in place. Vegetation surrounding the edge of the unit must be excavated and spread across the bottom of the West Basin. Demolition activities must be conducted in such a way as to retain the structural integrity of the West Basin and prevent unmanaged discharge of water. Materials generated during demolition must be disposed of in accordance with applicable regulations.

3) Following removal of the overlying water, saturated soil/sediments in the West Basin will be left in place and allowed to dewater through evaporation or water removal through use of a sump. Any water pumped from the unit will be subject to waste management requirements. If needed, the soils may be stabilized with

a moisture reduction agent or covered by a geofabric to assist in providing a bearing capacity sufficient to support the cover.

4) Backfill will consist of approximately 17,500 loose cubic yards of native soils that will be analytically tested according to a plan approved by the DTSC before placement as fill. Compaction specifications will not apply, as the backfill will be placed loosely to promote optimal vegetative growth over the surface of the unit, which will be used in the future as public green space.

5) A cover will be constructed that will meet the Site needs as a platform for future use as a publicly-available green space. The cover will be constructed slightly larger in area than the footprint of the existing West Basin. The cover will function with minimum maintenance, promote drainage and minimize erosion, accommodate lateral and vertical stresses due to earthquake events, and preclude ponding and runoff over the closed area. The surface will be seeded with native grasses.

Below is a brief summary of the construction work breakdown using on-site borrow soils. The project will be conducted in three parts.

Part 1 - Demolition of existing structures in the way of backfilling the West Basin.
- Estimated length of work - 1 working week / 5 days
- Equipment to be used:
  - Excavator - CAT 330
  - Loader - Case 590
  - Backhoe - Case 590
  - Diesel Pump - 6" Trash pump
- Waste to be generated:
  - Bulkhead - Pressure Treated Lumber, Misc Steel, PVC Piping
  - Steel Supports - Steel, concrete rubble (from foundations)
  - Pump Station - Pump machinery, Steel, electrical wiring
  - Area Lighting - Steel, 6 mercury vapor bulbs

Part 2 - Backfilling South End of West Basin
- Estimated length of work - 1 working week / 5 days
- Equipment to be used:
  Belly Scraper - CAT 623
  Dozer - D6
  Water Truck - 4000 gallon
  NO TRUCKS WILL BE USED FOR HAULING
- Estimated Volume - 4000 cy
- One way travel time 5 minutes - 24 loose yards/trip – estimate- 170 trips
- No Road Traffic
- Parking near site of construction.
- Vineyard grape vines will need to be disposed of/ burned at a nearby farm.
- Other than the vines, no waste is anticipated.

Part 3 - Backfilling North End
- Estimated length of work - 2 working week / 10 days
- Equipment to be used:
  Belly Scraper - CAT 623
  Dozer - D6
  Water Truck - 4000 gallon
  NO TRUCKS WILL BE USED FOR HAULING
- Estimated Volume - 8,000 cy
- One way travel time 5 minutes - 24 loose yards/trip – estimate- 340 trips
- No Road Traffic
- Parking near site of construction.
- Vineyard grape vines will be grubbed and disposed of.
- Others than the vines, no waste is anticipated.

Cross sections of the West Basin before and after backfilling activities are provided as Figures 3 and 4 below.

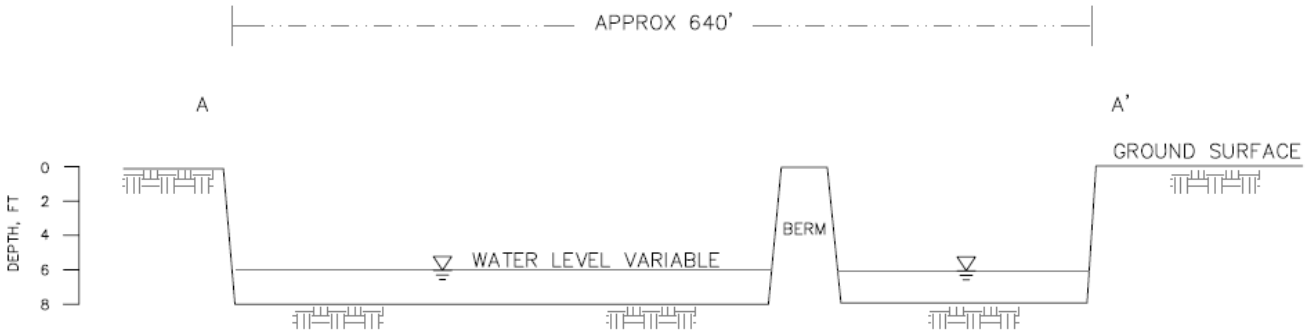

Figure 3 – West Basin before Backfilling

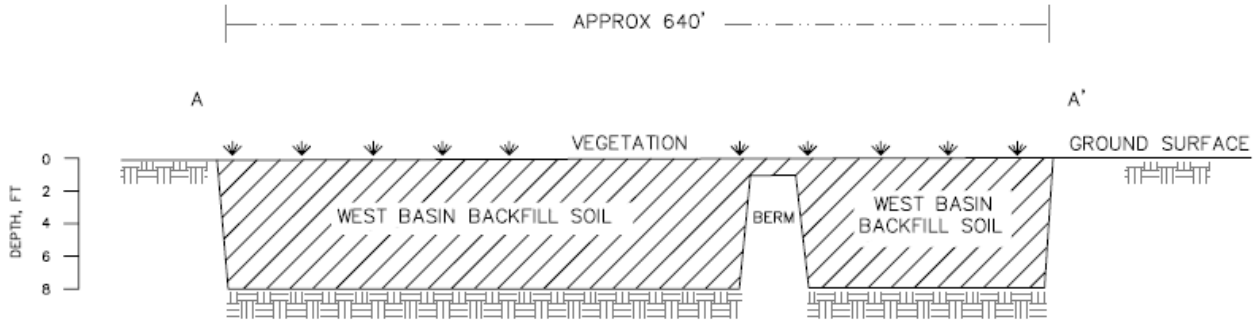

Figure 4 – West Basin after Backfilling

Specific references:

Corporate Remediation Group (CRG); "Draft Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; November, 2005.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; December, 2009.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; March 2011.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; July 2011.

URS: "SWMU 4.2 (West Basin) Closure Plan" March 2011.

DTSC: "Draft CEQA Initial Study, Groundwater Interim Measure Implementation - Zero Valent Iron Permeable Reactive Barrier, DuPont Oakley Facility"; 2006.

ENVIRONMENTAL IMPACT ANALYSIS:

1. Aesthetics

Project Activities Likely to Create an Impact:

None. There will be no visual disturbances to the area as a result of the project. The project is for closed unit maintenance.

Description of Baseline Environmental Conditions:

The Site is in eastern Contra Costa County in the industrial northwestern part of the City of Oakley. The Site is located on the south bank of the San Joaquin River, east of the Highway 160 Bridge, seven miles upstream of the confluence with the Sacramento River. This area is known as the San Joaquin – Sacramento Delta Valley. Topography in the vicinity of the plant can be characterized as gently rolling to flat. Ground surface slopes from hills a few miles southwest of the Site northward toward the river. Elevation at the Site ranges from approximately 25 feet above mean sea level (MSL) in the southern portion of the property (near a Burlington Northern/Santa Fe Railroad easement) to a few feet below MSL in the sloughs along the San Joaquin River. Although the general slope is toward the River and Little Break, several areas of fill and significant flat areas where plant buildings once stood have modified the natural topography. The most significant break in topography occurs near Little Break, where the sandy slope of the plant upland area terminates, and the flat marsh of Little Break begins. This boundary is most clearly visible in aerial photographs during dry periods when grassy areas turn brown, but the marsh vegetation remains green.

Analysis as to whether or not project activities would:

a. Have a substantial adverse effect on a scenic vista.

Impact Analysis:

The San Joaquin River lies north of the project Site. This northern edge of Contra Costa County is scenic, with views of waterways and surrounding bluffs of what is commonly referred to as the Bay-Delta Region. The Bay-Delta Region includes San Pablo Bay, Carquinez Straits, Suisun Bay, Honker Bay, and the confluence of the Sacramento and San Joaquin Rivers. However, the proposed project would not alter the visual character of the scenic vistas to the north; as such no adverse impact on a scenic vista would result.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway.

Impact Analysis:

State Highway 160 is on the list of California State Scenic Highways. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. Because no excavation or above-ground impacts will occur as a result of the proposed Post-Closure Permit, no adverse impacts to Highway 160's scenic resources will result.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

c. Substantially degrade the existing visual character or quality of the site and its surroundings.

Impact Analysis:

The Site is located within an industrial area. Backfilling the West Basin with clean soil will change visual conditions for this area; however, this small change will not significantly alter the visual character of the Site.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

d. Create a new source of substantial light of glare that would adversely affect day or nighttime views in the area.

Impact Analysis:

Construction activities associated with the filling of the West Basin will occur during the daylight hours. The described activities will not involve highly reflective materials or equipment that would result in glare, nor would artificial lighting be necessary to carry out this project.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Corporate Remediation Group (CRG); "Draft Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; November, 2005.

URS; "Draft Pos- Closure Permit Application for DuPont Oakley Site", Oakley, California; December, 2009.

URS; "Draft Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; March 2011.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; July 2011.

2. Agricultural Resources

Project Activities Likely to Create an Impact: None.

Description of Baseline Environmental Conditions:

Surface soils in upland portions of the Site are classified as Delhi Sands (DaC). In the wetland areas to the east of the project Site, Joice Muck (Ja) soils are present (USDA, 1977). While the Joice Muck soils are considered poor from an agricultural use standpoint, the Delhi Sands are typically considered good soils for a limited number of crops such as irrigated almonds, vineyards, some walnut varieties, and rangeland. The non-manufacturing portion of the former DuPont complex is either used for a small viticulture (vineyards), or is tidal wetland. The area that is used for viticulture is more than 1500 feet south of the project Site.

Analysis as to whether or not project activities would:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.

Impact Analysis:

There are no current or planned agricultural uses at the Site where former ponds and basins are located. A covenant for the area where the former ponds are located will include restrictions on groundwater extraction and building construction and/or occupancy. No further analysis is deemed to be necessary.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

b. Conflict with existing zoning or agriculture use, or Williamson Act contract.

Impact Analysis:

There are no current or planned agricultural uses at the Site where former ponds and basins are located. A covenant will place restrictions on groundwater extraction and building construction and/or occupancy. The California Land Conservation Act of 1965--commonly referred to as the Williamson Act--enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. The City of Oakley and the County of Contra Costa have not invoked a Williamson Act contract for the subject property. No further analysis is deemed to be necessary.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

c. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural uses.

Impact Analysis:

There are no current or planned agricultural uses at the Site where former ponds and basins are located. A small on-site vineyard of approximately one-acre in size will be removed and the soils used as a borrow source for backfilling of the West Basin. This area already has been rezoned for industrial use and therefore the loss of agricultural land has been deemed locally by the City of Oakley to be negligible. No further analysis is deemed to be necessary.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

References Used:

URS; Appendix C - West Basin Closure Plan "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; March 2011.

3. Air Quality

Project Activities Likely to Create an Impact:

Emissions generated by soil cap maintenance equipment (weed abatement), and groundwater sampling support vehicles during routine groundwater monitoring activities will be confined to the open, well-ventilated open space area subject to the Post-Closure Permit. Temporary emissions from heavy construction equipment will occur during proposed backfilling of the West Basin. The equipment used for the West Basin backfilling activities is discussed below.

Description of Baseline Environmental Conditions:

The Site is located within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The BAAQMD is responsible for enforcing air quality standards within its jurisdiction that are established by the California Air Resources Board (CARB) and the federal Environmental Protection Agency (EPA). According to the BAAQMD website (http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm) the air quality in the District is currently not in attainment with California Standards for particulate matter (PM) 2.5 and PM10, or ozone.

Analysis as to whether or not project activities would:

a. Conflict with or obstruct implementation of the applicable air quality plan.

Impact Analysis:

Table 1 below, part of the Dust Control Plan provided in the referenced West Basin Closure Plan, evaluated potential air emissions during backfilling activities. Total daily emissions for all pollutants are less than the BAAQMD thresholds. Even when a project's emissions do not exceed any of the BAAQMD thresholds, BAAQMD requires that a project implement certain basic construction control measures (BAAQMD, 2010). Consequently, a Dust Control Plan is provided in the *SWMU 4.2 (West Basin) Closure Plan* and incorporates the basic construction control measures recommended by BAAQMD.

Table 1
Closure Plan Air Emissions (pounds per day)

Pollutant	ROG	NOx	PM10	PM2.5
Part 1	3.0	23.1	2.2	1.5
Part 2	4.6	42.1	11.8	3.8
Part 3	4.5	41.0	11.8	3.7
BAAQMD Threshold	54	54	82	54
Exceed Threshold?	No	No	No	No

Notes: Emissions were estimated using the URBEMIS2007 model and are based on the estimated work schedule and type of equipment that are listed in the ***Project Activities*** section of this document. ROG – reactive organic gases, NOx – oxides of nitrogen, PM10 – particulate matter less than 10 microns in diameter, PM2.5 – particulate matter less than 2.5 microns in diameter.

The equipment used and the construction processes for West Basin Backfilling activities are:

Part 1 - Demolition of existing structures in the way of backfilling the West Basin.
- Equipment to be used:
  1 - Excavator - CAT 330
  1 - Loader - Case 590
  1 - Backhoe - Case 590
  1 - Diesel Pump - 6" Trash pump

Part 2 - Backfilling South End of West Basin
- Equipment to be used:
  2 - Belly Scrapers - CAT 623
  1 - Dozer - D6
  1 - Water Truck - 4000 gallon
  NO TRUCKS WILL BE USED FOR HAULING

Part 3 - Backfilling North End
- Equipment to be used:
  2 - Belly Scraper - CAT 623
  1 - Dozer - D6
  1 - Water Truck - 4000 gallon
  NO TRUCKS WILL BE USED FOR HAULING

Dust Control Measures
The following nine dust control measures shall be used to minimize PM10 and PM2.5 dust generated by West Basin backfilling activities.

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day.

2. All vehicles transporting soil, sand, or other loose material off-site will be covered.

3. All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping will be prohibited. For this project, it is not anticipated that vehicles used for this construction will move on public roads.

4. All trucks and equipment, including their tires, will be washed off prior to leaving the Site.

5. All vehicle speeds on unpaved roads will be limited to 15 mph.

6. Idling times will be minimized either by shutting equipment off when not in use or by reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points.

7. All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. A qualified mechanic will certify that all equipment is running in proper condition prior to operation.

8. A publicly visible sign will be posted showing the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Bay Area Air Quality Management District's phone number shall also be visible to ensure compliance with applicable regulations.

9. All excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 mph.

Thus, project activities will not conflict with or obstruct implementation of BAAQMD's air quality plan.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Impact Analysis:

Based on the emissions estimate presented in Table 1 above, no impact is anticipated.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

c. Result in cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Impact Analysis:

The implementation of the Post-Closure Permit will incorporate the construction activities discussed in item a. above. The air impacts from bi-annual weed abatement (mowing, discing, and herbicide application) are considered less than significant and will not considerably affect the net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

Based on the emissions evaluation presented in Table 1 above, and the previous discussion, there are no cumulative increases of any criteria pollutants that will exceed quantitative thresholds.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

d. Expose sensitive receptors to substantial pollutant concentrations.

Impact Analysis:

The only nearby residence is located approximately 300 feet away at the Lauritzen Yacht Harbor (LYH). The nearest residential neighborhood is nearly one mile to the southeast of the Ponds and Basins. The post-closure activities would not pose any additional pollutant risks. During mowing and discing activities or the moving of clean soil during West Basin backfilling activities, there may be a potential for fugitive dust emissions; however, the westerly prevailing winds and engineering controls (dust suppression with water) will mitigate their impact on the single nearby LYH residence to less than significant. Based on the emissions evaluation presented in Table 1 above, and the previous discussion, there are no cumulative increases of any criteria pollutants that will exceed quantitative thresholds.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

e. Create objectionable odors affecting a substantial number of people.

Impact Analysis:

Only one residence is located in the area (300 feet west of the ponds and basins). The westerly prevailing winds will mitigate the only anticipated objectionable odor (temporary diesel fumes from trucks and tractors during West Basin backfilling activities). Dust and odor control are discussed the Dust Control Plan (Appendix D of the referenced *SWMU 4.2 (West Basin) Closure Plan*) and indicate that complaints shall be investigated and corrective measures shall be taken to reduce or eliminate the odor source.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

f. Result in human exposure to Naturally Occurring Asbestos (see also Geology and Soils, section f.).

Impact Analysis:

Naturally occurring asbestos in California typically occurs in association with serpentine rocks. Based on the geological map for the area, no serpentine rocks are present within the vicinity of the Site.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Corporate Remediation Group (CRG); "Draft Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; November, 2005.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; December, 2009.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; March 2011.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; July 2011.

URS: SWMU 4.2 (West Basin) Closure Plan" March 2011.

BAAQMD:
A. Ambient Air Quality Standards & Bay Area Attainment Status (January 2010)
B. 1-hour Attainment Factsheet http://www.baaqmd.gov/pln/plans/ozone/2003_workgroup/attainment.pdf
C. BAAQMD 2004. Past communications with communications with Thu H. Bui, Air Quality Engineer II, Bay Area Air Quality Management District, 939 Ellis Street, San Francisco, CA 94109, Telephone (415) 749-5119.

CDMG 1987a. *Geological Map of the Sacramento Quadrangle, California. 1:250,000*. California Department of Mines and Geology.

CDMG 1987b. *Geological Map of the San Jose Quadrangle, California. 1:250,000*. California Department of Mines and Geology.

4. Biological Resources

Project Activities Likely to Create an Impact:

- Activities associated with backfilling the West Basin
- Direct contact with vegetation removal equipment during Site maintenance (mowing and discing)
- Direct contact during groundwater sampling activities
- Trucks traversing Site areas
- Foot traffic
- Habitat disturbance in close proximity to a den, burrow, or nesting Site

The only above-ground facilities will be small clusters of groundwater monitoring wells, with two-foot-high standpipes visible. No emissions are anticipated from these wells. These wells will be monitored and/or sampled quarterly, bi-annually, and annually as part of the Oakley Site groundwater monitoring program.

Description of Baseline Environmental Conditions:

General

The West and East Basins, and Ponds A, B, and C are on the non-manufacturing portion of the DuPont Oakley Site most of which is under vegetative cover and to the north and east becomes tidal wetland. Prior to facility construction, the Site was used for agriculture and viticulture after its conversion from tidal marsh.

Previous Biological Surveys

A bird survey, a rare plant survey and two wetlands delineations have been conducted at the DuPont Oakley Site during the past 10 years. A total of 44 bird species were observed as using the DuPont Oakley Site during the survey period. Among the observed bird species, 33 were present in Little Break, 10 were at Central Slough, and 17 were present in the grasslands and eucalyptus groves of upland areas. Two species noted during this survey are considered by California Department of Fish and game (CDFG) as species of special concern: northern harrier (Circus cyaneus) and loggerhead shrike.

Rare plant surveys of the Central Slough and Little Break were conducted 2001. U.S. Fish and Wildlife Service (USFWS) records and the California Natural Diversity Database (CNDDB) were reviewed prior to the surveys. Five special-status plant species were found during the survey, including the Suisun Marsh aster (Symphyotrichum lentum), northern California black walnut (Juglans hindsii), Delta tule pea (Lathyrus jepsonii var. jepsonii), Mason's lilaeopsis (Lilaeopsis masonii), and Delta mudwort (Limosella subulata). The identification of the species was confirmed by comparing specimens from the DuPont Oakley Site with known occurrences of specimens at the Antioch Dunes National Wildlife Refuge (NWR), which is located along the San Joaquin River approximately two miles downstream of the DuPont Oakley Site. While the Suisun Marsh aster, Delta tule pea, Mason's lilaeopsis and Delta mudwort are relatively common in the Sacramento-San Joaquin Delta, their limited distribution outside of the Delta has warranted their listing as special-status plant species.

A survey of potential jurisdictional waters of the United States and wetlands was conducted in July and August 2000. A total of approximately 80 plant species were identified in 15 vegetative communities. No special-status plant species, including any of those listed in the 2001 rare plant survey, are identified in the 2000 wetland delineation report. Antioch Dunes evening primrose, the only federal-listed plant species in the surrounding site areas, was not observed during this wetland survey.

A wetlands delineation report for potential jurisdictional waters of the United States and wetlands was conducted in June 2006 in accordance with standard procedures developed by the United States Army Corps of Engineers (USACE). Like the earlier 2000 wetland delineation report, the 2006 report identifies plant species observed during the survey and summarizes the types of vegetation communities over the entire Site. A total of approximately 80 plant species are identified in 19 vegetative communities. No special-status plant species, including those listed in the 2002 rare plant survey, are identified in the 2006 wetland delineation report. Antioch Dunes evening primrose, the only federal-listed plant species in the surrounding Site areas, was not observed during this wetland survey.

Recent Biological Survey

A recent reconnaissance-level biological survey of the DuPont Oakley Site was conducted in July 2010 by a qualified biologist and terrestrial ecologist (Parsons 2010). The Survey results for each of the six species from the CNDDB and other protected species that were observed by the ecologist during the April 2010 survey are discussed below.

Antioch Dunes Evening Primrose

The Antioch Dunes evening primrose is protected as endangered by both the federal Endangered Species Act (ESA) and the California ESA. The Antioch Dunes evening primrose favors active dynamic sand dunes, and the survey therefore focused on areas of the Site where such riverine soils historically accumulated and might still occur in isolated pockets. The evening primrose does not grow anywhere on the DuPont Oakley Site.

Lange's Metalmark Butterfly

Lange's metalmark butterfly is a federal-listed endangered species. The state of California does not accord it formal protected status. The butterfly occurs only where active dunes persist, with minimal growth of grasses and shrubby species which overcrowd the open spaces. The butterfly depends critically on buckwheats (*Eriogonum nudum* and *E. fasciculatum*) as host plants for caterpillars. Very few butterflies of any species were seen during 2010 survey. Butterflies that were seen were all common species. No buckwheat plants were found anywhere during the 2010 survey probably because upland areas of the Site are highly disturbed due to historical agricultural and industrial uses and contain no remnant dunes. Lack of those habitat features critical in the life cycle of Lange's metalmark butterfly therefore indicate it does not occur on the DuPont Oakley Site.

California Silvery Legless Lizard

The California silvery legless lizard has no formal protective status by either federal or state statute. However, the CDFG considers it a species of special concern. Legless lizards usually inhabit sandy or rocky areas with open space and native perennial shrubs, often frequenting the duff around such shrubs or small trees. No silvery legless lizards were encountered anywhere on the DuPont Oakley Site. Ongoing Site maintenance practices and the virtual absence from upland areas of shrubs indigenous to the lower part of the San Joaquin River Delta due to historical agricultural practices and industrial use both contribute to the absence of suitable habitat for the silvery legless lizard. In addition to a general lack of appropriate habitat, the presence of house cats (*Felis catus*) around the Administration Building and at the Lauritzen Yacht Harbor marina make it unlikely that legless lizards persist on Site because the lizards move rather slowly in a snake-like manner and are thus easy prey for house cats. Therefore, it is highly unlikely that silvery legless lizards now inhabit any part of the DuPont Oakley Site.

Giant Garter Snake

The giant garter snake is a federal- and state-listed threatened species. It is an exceptionally aquatic garter snake, usually encountered in water-filled channels, ditches, and wet swales. Areas containing this type of habitat were surveyed for the snake. No snakes of any species were seen at suitable wet features on the Site during the survey. The author observed no shed snake skins, none of the distinctive tracks made by snakes when they cross loose dirt or damp soil, and no scat indicative of snakes. However, given the large area encompassed by the open water and wetlands within Little Break, the survey could not yield meaningful information about the extensive freshwater marsh between the upland and the levees in this area. While suitable habitat for giant garter snake does not exist in the upland areas of the Site, the upper edges of freshwater marsh at Little Break could be habitable. Giant garter snakes

have been found across the San Joaquin River on Sherman Island. The San Joaquin River would pose an insurmountable barrier to natural dispersal of giant garter snakes, and thus the chances of the species getting to the DuPont Oakley Site are very slight.

California Black Rail

The California black rail is a state-listed threatened bird species. Black rails nest in grassy places adjacent to marshlands. Nesting begins in February and continues through June. Suitable habitat for California black rails exists at the DuPont Oakley Site where grassy areas gradually shift to the upper part of freshwater marsh. However, no black rails were seen or heard at the Site during the April 2010 survey. Records from refuges and wildlife sanctuaries in the Delta indicate that California black rails nest in these areas in the appropriate season and are present throughout the year. The conditions at Little Break would seem opportune for colonization by California black rail.

Swainson's Hawk

Swainson's hawk is a state-listed threatened species. It hunts over open grassy areas in the Delta region. Swainson's hawk will nest in large trees that afford an expansive view of surrounding lands. Such hawk nests are distinctive in their size and, at the time of the spring reconnaissance of the Site, likely would have chicks in them. No hawk nests were found in any trees on the DuPont Oakley Site. No areas under any particular group of trees showed extensive whitewash in one particular spot, as is usually the habit of large hawks. Once each on two separate days, solitary Swainson's hawks were seen at a considerable distance. Each was merely crossing over the Site; neither showed any predilection to forage on the upland areas of the Site.

Other Species

Loggerhead shrike (*Lanius ludovicianus*) may have been observed during the 2000 bird survey but was not among the species identified by CNDDB in the area. A nesting pair of loggerhead shrikes was observed on the Site during the 2010 survey. The nest is located in a large coyote brush (*Baccharis pilularis*) growing immediately adjacent to the fence line on the south side of the Site. While listening for black rails from different spots on the three short dirt roads that lead from the upland to separate clusters of monitoring wells between the upland and bulrush marsh, many common yellowthroat warblers (*Geothylpis trichas*) were seen and heard. The warbler was abundant in the bulrushes west of Little Break. The subspecies named salt marsh common yellowthroat (*G. trichas sinuosa*) is regarded as a species of special concern by CDFG, and is known to occur in the lower part of the Delta and upper reaches of San Francisco Bay. However, this subspecies is indistinguishable from the more common species when in flight through bulrush stands, and its definitive identification requires measurements of body parts for comparison with museum specimens. In lieu of such morphological data, it is prudent to assume these birds at Little Break are in fact the salt marsh subspecies. In addition to common yellowthroats, yellow warblers (*Dendroica petechia*) were seen and heard in willow thickets adjacent to the central and eastern access roads. In the author's experience, these willow stands appear well suited for nesting by yellow warblers, although no attempt to locate nests was made. As with salt marsh yellowthroat warblers, a subspecies of yellow warbler (*D. petechia brewsteri*) is also a species of special concern to CDFG. A female northern harrier (*Circus cyaneus*) was seen one time foraging over taller grasses on mesic soils southwest of Little Break. CDFG considers northern harriers a species of special concern. Incidental survey data indicate that the DuPont Oakley Site affords nesting opportunities for several species of common birds. An active mourning dove nest (*Zenaida macroura*),was placed deliberately on the ground amongst annual, nonnative grasses beneath gum trees in the south part of the Site**.**

U.S. Army Corp of Engineers (USACOE)

On December 28, 2008 the USACOE determined that the West Basin is an intrastate isolated water body with no apparent interstate or foreign commerce connection. As such, the West Basin is not regulated by the ACOE under Section 404 of the Federal Clean Water Act.

Analysis as to whether or not project activities would:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Impact Analysis:

Six special-status plant and animal species were identified as having some potential to occur on the Site given their historic range, their known occurrences and site-specific conditions, which include three general types of ecological settings: dry, upland terrain; freshwater marsh; and open water. The six target species include:

- Antioch Dunes evening primrose (*Oenothera deltoides* ssp. *howellii*)
- Lange's metalmark butterfly (*Apodemia mormo langei*)
- California silvery legless lizard (*Anniella pulchra pulchra*)
- Giant garter snake (*Thamnophis gigas*)
- California black rail (*Laterallus jamaicensis*)
- Swainson's hawk (*Buteo swainsoni*)

Of these six species, one was observed during the survey. Solitary Swainson's hawks were observed on two occasions in flight over the DuPont Oakley Site. However, the hawks did not exhibit foraging behavior during their fly-over and no nests or evidence of roosting were observed on site. The Antioch Dunes evening primrose plant was not observed on the DuPont Oakley Site and its favored soil substrate (active dynamic sand dunes) has been removed by past agricultural and industrial activities on the Site. This species is unlikely to occur on site. No specimens of Lange's metalmark butterfly were observed during the survey. Obligate host plants for its caterpillars (buckwheats) do not grow anywhere on the DuPont Oakley Site. This species is unlikely to occur on site. No specimens or sign of silvery legless lizard were observed during the survey. Frequent disturbance of potential habitat and predation by house cats make it unlikely that this species is present on site. Small, narrow stretches of unmaintained fringe around the Central Slough wetlands and the artificial channel between it and Little Break afford very marginal habitat for giant garter snake. Both marshy features are nearly completely isolated from Little Break, and nearly entirely surrounded by the disked and mowed upland. The disturbed nature of the land that encircles Central Slough and the channel provides for very low quality habitat overall, and the likelihood of giant garter snake inhabiting either of these places is very small. The upper edges of freshwater marsh at Little Break could provide habitat for giant garter snake; this area is not subject to the current proposed activities on the Site. No California black rails were seen or heard at the Site during the Parsons 2010 survey; suitable habitat for rails exists at the Site where grassy areas gradually shift to the upper part of freshwater marsh. The proposed post-closure activities will not involve such areas on the Site.

In addition, four bird species designated by CDFG as species of special concern – the loggerhead shrike, yellow warbler, northern harrier, and salt marsh common yellowthroat warbler – were observed during the survey (although identification of the subspecies of warblers is not definitive).

The Parsons 2010 report concluded that pre-construction surveys are recommended for the project during the spring months, and the requirement for such surveys are included in the project plan. An excerpt from the Parsons report is provided below pertaining to the likelihood of bird presence at the Site.

"Incidental survey data indicate that the DuPont Oakley Site affords nesting opportunities for several species of common birds. For example, while listening for black rail from near MW-90 MW-93, and MW-112, a spotted towhee (Pipilo maculatus) scolded for more than 10 minutes before the author shifted auditory focus and quickly heard towhee chicks in a nest concealed in willows not more than 33 feet away. An active mourning dove nest (Zenaida macroura), placed deliberately on the ground amongst annual, nonnative grasses beneath gum trees in the south part of the site, was discovered while walking and raking. This location is on a raised berm largely inaccessible by the maintenance tractor and gang disk. The Migratory Bird Treaty Act of 1918 prohibits activities that would jeopardize eggs or chicks in nests. Therefore, a survey specifically for nesting bird species is recommended before any construction activities occur in the spring months to comply with the provisions of this biological conservation statute."

Based on the above, activities associated with the Post-Closure Permit will have a less than significant impact on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Conclusion:

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Impact Analysis:

The recent 2010 Biological Survey did not identify any riparian habitat or other sensitive natural community present within the immediate project area. Additionally, the 2006 Final East Contra Costa County, Habitat Conservation Plan/Natural Community Conservation Plan (HCP) identifies the subject area for urban development. Therefore, there will be no impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Impact Analysis: The ACOE determined that the West Basin is an intrastate isolated water body and is not regulated by the Corps of Engineers under Section 404 of the Federal Clean Water Act. Therefore, activities associated with the Post-Closure Permit do not apply.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Impact Analysis:

The regulated units are situated 1000 feet from the southern bank of the San Joaquin River. Native residents do not use the Site for access. The Post-Closure Permit activities will not impact the San Joaquin River and any native resident or migratory fish species. A review of the 2010 biological survey did not identify any evidence of migratory species habitat on the Site. As stated above, Solitary Swainson's hawks were observed on two occasions in flight over the DuPont Oakley Site. However, the hawks did not exhibit foraging behavior during their fly-over, and no nests or evidence of roosting were observed on site. Therefore, the proposed Post-Closure Permit will have a less that significant impact on the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

e. Conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impact Analysis:

The recent 2010 Biological Survey did not identify any riparian habitat or other sensitive natural community is present within the immediate project area. The project area does not contain any mature trees or endangered species of trees which would trigger a tree preservation policy.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impact Analysis:

The U.S. Fish and Wildlife Service and the California Department of Fish and Game have extended to the City of Oakley the authority to grant permits to project applicants within their jurisdictions. Instead of seeking endangered species permits from the state and federal agencies, project proponents may now acquire their endangered species approvals from their local land use planning agency. The permitted activities are not likely to conflict with the 2006 Final East Contra Costa County, Habitat Conservation Plan/Natural Community Conservation Plan (ECC/HCP NCCP), which identifies the subject area for urban development. An application to East Contra Costa County Habitat Conservation Plan Association, however, is required prior to any permitted activities.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Corporate Remediation Group (CRG); "Draft Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; November, 2005.

URS; "Draft Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; December, 2009.

URS; "Post- Closure Permit Application for DuPont Oakley Site", Oakley, California; March 2011.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; July 2011.

Corporate Remediation Group (CRG); Delineation Report for Potential Jurisdictional Waters of the United States; April 2007.

CA DFG, 2000. Natural Diversity Database (Federal Species of Concern). California Department of Fish and Game, Wildlife and Habitat Data Analysis Branch. September 5, 2010.

CA DFG, 2010 California Natural Diversity Database http://imaps.dfg.ca.gov/viewers/cnddb_quickviewer/app.asp

Parsons, Reconnaissance Level Biological Survey Report, DuPont Oakley Site; July 2010.

ECCC HCP, "The Final East Contra Costa County, Habitat Conservation Plan/Natural Community Conservation Plan"; October 2006

ECCC HCP, December 2010 and January 2011; Communication with East Contra Costa County Habitat Conservancy representative Krystal Hinojosa.

5. Cultural Resources

Project Activities Likely to Create an Impact:

No adverse impacts to Cultural Resources are expected to result from the implementation of the Post-Closure Permit.

Description of Baseline Environmental Conditions:

The following cultural resources discussion is based on the results of a Cultural Resources Inventory of the DuPont Bridgehead Road conducted by Garcia and Associates in 2004 (GANDA 2004). The project Site is located in the City of Oakley in Contra Costa County, California. The project Site is shown on the USGS Jersey Island 7.5 Minute quadrangle (1978), and is located in Township 2N, Range 2E, in the southern ½ of Section 15 and northern ½ of Section 22. Elevations at the Site range from seal level to 31 feet above mean sea level.

Before 1772, hunter/gatherer Bay Miwok-speaking peoples, in whose ethnographic territory the DuPont Oakley Site lies, occupied the eastern portions of Contra Costa County from Walnut Creek east to the Sacramento-San Joaquin Delta. The primary political unit of the Bay Miwok was the tribelet. Prehistoric settlements tended to be located near the edge of the delta, principally on naturally occurring high spots not subject to annual flooding. The Julpun tribelet held the northern portion of present-day Contra Costa County along the San Joaquin River.

In 1772, the Pedro Fages expedition traveled through Contra Costa County in search of a land route to Point Reyes. The expedition camped near the San Joaquin River in the vicinity of Antioch in March 1772. In 1776, The Juan Bautista de Anza and Pedro Font, a Franciscan priest, led an expedition through the Antioch area, camping in the present-day Antioch Bridge area on spring 1776, and continuing on southeastwardly past present-day Oakley. Contra Costa County was one of the original 27 counties of California, created by an act of legislature confirmed in April 1851.

Early development in the county included ranchos (such as that of the Castro and Marsh families), coal mining and shipment (through Pittsburgh), steel milling, and sugar refining. In modern times, dairy and poultry production, farming of fruits, nuts and field crops, large-scale nurseries, petroleum refining, natural gas production, and varied manufacturing industries drive the local economy.

The area subject to the Post-Closure Permit lies near an area that was once reclaimed from marsh areas for agricultural use, including vineyards. DuPont purchased the property in 1955, constructing and operating manufacturing facilities on approximately 54 acres south of the regulated basins and ponds (units). By 1999, all manufacturing areas were closed and decommissioned. Numerous drilling projects have been conducted in the general vicinity of the regulated units including the installation of a Permeable Reactive Barrier (PRB) wall constructed to impede contaminated groundwater migration to the San Joaquin River. The cuttings from the drilling projects were carefully scrutinized, and at no time have cuttings revealed any evidence of archeological sites in the vicinity of the regulated units.

The 2004 records search and field survey did not identify cultural or historical resources within the vicinity of the project Site. Only one study identified cultural resources within a ½-mile radius of the DuPont Oakley Site. This site, designated as P-07-002614, consisted of a concentration of historic debris and a sparse scatter of prehistoric artifacts. No indicators of prehistoric or historic use or occupation were observed within the intensively-surveyed portions of the project Site. No local, state or federal historically or architecturally significant structures, landmarks, or points of interest have been identified within or adjacent to the project Site. Nevertheless, in the unlikely event that resources are identified during backfilling activities of the West Basin, they will be evaluated by a Registered Professional Archaeologist against the criteria of the California Register of Historical Resources, and, if judged significant, be considered a historic resource as defined by CEQA. Also, if resources are identified during construction, construction activities will stop in the area of the find until the finds can be assessed and evaluated by a Registered Professional Archaeologist. If, at any time during the project, human bone is found, all work in the vicinity of the find will stop and the County Coroner will be notified in compliance with Section 7050.5 of the California Health and Safety Code. If human remains are discovered, special rules [Guidelines sec. 15126.4(b)] will apply to the Site.

Analysis as to whether or not project activities would:

a. Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5.

Impact Analysis:

According to California Code of Regulations, title 14, section 15064.5, the term "historical resources" include those sites listed in, or determined to be eligible by the State Historical Resources Commission, a resource included in a local register of historical resources, or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. As indicated in the 2004

Garcia and Associates report cited above, no historical resource as defined in section 15064.5 have been identified within the vicinity of the subject Site. However, as stated above in the unlikely event that resources are identified during backfilling activities of the West Basin, they will be evaluated by a Registered Professional Archaeologist against the criteria of the California Register of Historical Resources, and, if judged significant, be considered a historic resource as defined by CEQA.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

b. Cause a substantial adverse change in the significance of an archeological resource pursuant to 15064.5.

Impact Analysis:

As indicated in the 2004 Garcia and Associates report cited above, no archaeological sites have been identified within the vicinity of the subject Site. However, as stated above in the unlikely event that an archeological site is identified during backfilling activities of the West Basin, they will be evaluated by a Registered Professional Archaeologist and, if judged significant, be considered a resource as defined by CEQA.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impact Analysis:

The DuPont Oakley Site is not located in a location likely to exhibit unique geologic features, nor is there a likelihood that unique paleontological resources will be discovered during the West Basin backfilling activities. However, as stated above, in the unlikely event that an archeological site is identified during backfilling activities of the West Basin, they will be evaluated by a Registered Professional Archaeologist and, if judged significant, be considered a unique paleontological or geologic resource as defined by CEQA.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

d. Disturb any human remains, including those interred outside of formal cemeteries.

Impact Analysis:

The Site is not located within or very near a location where human remain are expected and no formal cemeteries are located within 1/2 –mile of the project Site. The project Post Closure Plan includes and will comply with the cultural resources protection provisions provided in the Garcia and Associates 2004 report as follows:

"In the unlikely event that cultural resources are identified during construction, they should be evaluated by a Registered Professional Archaeologist against the criteria of the California Register of Historical Resources, and, if judged significant, be considered a historic resource as defined by CEQA. If resources are identified during construction, construction activities must stop in the area of the find until the finds can be assessed and evaluated by a Registered Professional Archaeologist. If, at any time during the project, human bone is found, all work in the vicinity of the find must stop and the County Coroner must be notified in compliance with Section 7050.5 of the California Health and Safety Code. Also, under CEQA, special rules apply to any archaeological site known to contain human remains (Guidelines sec. 15126.4(b))."

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Garcia and Associates: Stephen Bryne. A Cultural Resources Inventory of the DuPont Bridgehead Road Specific Plan Site, City of Oakley, Contra Costa County, California. May 3, 2004.

6. Geology and Soils

Project Activities Likely to Create an Impact:

Project activities are not likely to create a geologic impact.

Description of Baseline Environmental Conditions:

The ground surface slopes from hills a few miles southwest of the Site northward toward the San Joaquin River. Most of the Site has been graded flat and lacks topographic relief, except around water bodies. Historically, the topography of the Site had been gently undulating, inactive, eolian dunes with 2 to 9 percent slopes. Elevation at the Site ranges from approximately 25 feet above mean sea level (MSL) in the southern portion of the property (near the Burlington Northern/Santa Fe railroad track) to a few feet below MSL in the sloughs along the San Joaquin River. Although the general slope is toward the San Joaquin and Little Break, several areas of fill and significant flat areas where the plant buildings once stood have modified the natural topography. The most significant break in topography occurs near Little Break and the Central Slough, where the sandy slope of the plant upland area slopes down to these water bodies and marsh areas. This boundary is most clearly visible in aerial photographs taken during dry periods, when grassy areas turn brown but the marsh vegetation remains green.

Surface soil in uplands portions of the Site have been designated as the Delhi Sands (DaC) and in the wetlands areas to the north and east of the regulated units are defined at the Joice Muck (Ja). The location of the Regulated units is entirely within the Delhi Sand area. The Delhi Sand is typically Holocene to Pleistocene age wind-modified stream deposits (sand dunes), consisting of sand with less than 5% to 10% fines. Based on texture, the USDA designation is sand, and UCSC designation ranges from sand, poorly graded (SP) to sand, poorly graded with silt (SP-SM). There are only a few construction restrictions for the Delhi Sand, because settlement and expansiveness are not issues associated with this soil. However, this soil is noted for a lack of compressive strength, susceptibility to failure due to over-steeping, potential for liquefaction during major seismic events, and potential for lateral spreading due to loading. Overland flow is rarely observed with this soil because of the very high permeabilities and the high rates of infiltration. Based on borings at the Site, these surface dune sands extend to about 15 feet below ground surface (bgs).

The Joice Muck consists of nearly level soils present in and adjacent to brackish marshes influenced by tides. This soil is typically a saline silty clay (peaty muck) with as much as 45% organic matter or organic debris. The textures for this soil observed at the Site include organic-rich fat clay (OH) to peat (PT). This soil is noted for severe constructability restrictions due to lack of compressive strength, significant settlement and lateral spreading due to loading, poor drainage, and expansiveness. During high rainfall periods, areas with the Joice Muck tend to flood due to lack of topographic relief, a shallow water table, and very low permeability precluding significant infiltration.

To the south and west of the Oakley Site, a Holocene-aged alluvial fan unit is adjacent to the bedrock hills. Further west, another alluvial fan, interpreted to be of Pleistocene age, is exposed. Because it is older, it is likely that there are Pleistocene aged fan deposits beneath some of the Holocene fan deposits. These alluvial fans are believed to extend beneath the dune sand deposits, interfingering with sediments from the San Joaquin River, and form the majority of the unconsolidated sediments beneath the Site. The alluvium is underlain by the Pleistocene Montezuma Formation, which consists of Pleistocene age stiff, sandy to silty marine clay. Based on geophysical and drillers' logs from a deep waste injection well installed on-site in 1955 (WDW No. 1, abandoned in 1982), the Montezuma Formation was identified from 120 to 390 feet bgs. The driller's log further indicates that below the Montezuma Formation shaly sand was located from 400 to 440 feet bgs, shale from 440 to 660 feet bgs, possible sandstone from 660 to 690 feet bgs, and shale from 690 to 1350 feet bgs (the total depth logged). The depth to bedrock is not known at the Site. Based on regional geology, it is presumed to be Pliocene-aged Tulare Formation, which is exposed approximately 1-½ miles southwest of the Site.

The aquifer system above the Montezuma Formation is in the Pittsburg Plain Groundwater Basin (DWR 2003). Hydrogeologically, the subsurface at the Site has been divided into three primary aquifer intervals. The near surface dune sands extend to approximately 15 feet bgs and constitute the Surficial Aquifer. The Surficial Aquifer consists of moderate to high permeability silty sand and sand. Throughout the Site, the Surficial Aquifer is underlain by the Surficial/Upper (S/U) Aquitard. The S/U Aquitard is less than 5 to 20 feet thick, consists of silt to silty clay, and is absent in the eastern portion of the Site. The S/U Aquitard is underlain by the Upper Aquifer, typically 10 to 20 feet thick, which is divided the U1 and U2 based on a silty interval that is locally present. The Upper Aquifer consists of high permeability, fine- to medium-grained sand. The Upper Aquifer is separated from the Lower Aquifer by the Upper/Lower (U/L) Aquitard. The U/L Aquitard varies locally from 5 feet of thinly interbedded sand and clayey silt, to more than 10 feet of dense silty clay. The Lower Aquitard is 45 to 65 feet thick, and appears to consist of three major fining-upward sequences. The L1 (the uppermost fining-upward sequence) generally consists of high permeability, fine- to medium-grained sand with occasional thin silt or clay interbeds. The L2 and L3 (the middle and lower fining-upward sequences, respectively) generally consist of very high permeability, medium- to coarse-grained sand with frequent gravel interbeds and basal gravel. The Lower Aquifer is underlain by the Montezuma Formation, which acts as a hydrogeological basement at the Site, as well as regionally.

Analysis as to whether or not project activities would:

a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- ❖ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. (Refer to Division of Mines and Geology Special Publication 42).
- ❖ Strong seismic ground shaking.
- ❖ Seismic-related ground failure, including liquefaction.
- ❖ Landslides.

Impact Analysis:

A detailed study has been made of all geologic aspects at the DuPont Oakley Site that could expose people or structures to possible hazards. The following is a list of possible negative impacts that could result from (geologic) seismic or fault-line activities at the Site:

- The Site is not within an Alquist Priolo (AP) Earthquake Fault Zone.
- The nearest significant fault is the Antioch Fault. The nearest exposure is approximately 3 miles southwest of the Site. The Antioch Fault has not been documented as a recently (Holocene) active fault as defined by the AP Act.
- The Oakley Site has the potential for strong seismic ground shaking, and therefore is entirely within seismic hazard Zone 4 (as defined in California Code of Regulations, title 24, section 1629A.4.1).
- Because of the shallow depth of groundwater and the presence of relatively unconsolidated dune sands to a depth below the water table, most of the Oakley Site has a “high susceptibility” to liquefaction. North and east of the regulated units, the wetlands have peaty muck soils overlying unconsolidated sands, which have “very high susceptibility” to liquefaction failure. Liquefaction failure can include settling, lateral spreading, bank failure, and ground surface rupture.
- Because of a general lack of topographic relief at the Site, there is little to no hazard of landslide failure in the vicinity of the regulated units. The only potential for slope failure throughout the Site is at the 1- to 3-foot-high banks at wetlands margins.
- In the vicinity of the regulated units, given the sandy soils (with less than 5% to 10% fines and little clay) no hazard to structures is expected due to expansive soils.

Although the Site is not located within an Alquist-Priolo Earthquake Fault Zone, the proximity to other major earthquake faults in the area indicates a potential for significant ground shaking during a major seismic event.

Further, the nature of the soils and shallowness of groundwater indicate the potential of significant ground failure during a major seismic event. The general lack of topographic relief and the lack of major ground loads (structures) in the vicinity of the regulated units somewhat reduces the potential for ground failure during a major seismic event.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

b. Result in substantial soil erosion or the loss of topsoil.

Impact Analysis:

The Ponds and the East and Emergency Basins are presently capped at grade. The Post-Closure Permit will include the backfilling of the West Basin with clean soil to ground level. No slopes substantial enough for soil erosion to be considered a concern are to be constructed.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

Impact Analysis:

Refer to the Environmental Setting above. There is no hazard due to collapse. Although there is a significant potential for liquefaction in the area in response to a major seismic event, activities involved in Post-Closure monitoring will not result in any hazard to life or property.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

Impact Analysis:

Available site-specific geotechnical data is not of the type to allow calculation of the Expansivity Index to determine the actual expansivity hazard presented by this soil. However, the very low fines content, and therefore general absence of swelling clay minerals, would strongly indicate that this soil is non-expansive. The regulated units will have no above-ground structures that will present a hazard to life or property even if the surface presented an expansivity hazard.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of water.

Impact Analysis:

No septic tank or wastewater disposal systems are proposed as part of permitted activities.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

f. Be located in an area containing naturally occurring asbestos (see also Air Quality, f.).

Impact Analysis:

Asbestos in California typically occurs in association with serpentine rocks. Based on the geological map for the area, no serpentine rocks occur within the vicinity of the regulated units.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

CDMG 1987a. Geological Map of the Sacramento Quadrangle, California. 1:250,000. California Department of Mines and Geology.

CDMG 1987b. Geological Map of the San Jose Quadrangle, California. 1:250,000. California Department of Mines and Geology.

CDMG 2000. Alquist-Priolo Earthquake Fault Zone Maps. Special Publication 42 [Maps on CDs]. California Department of Mines and Geology.

DWR 2003. Groundwater Basins in California. Bulletin 118-03. California Department of Water Resources.

CRG 2002. Current Conditions Report for the DuPont Oakley Site. Corporate Remediation Group. November 5th.

USDA 1977. Soil Survey of Contra Costa County. United States Department of Agriculture.

USGS 2000. Preliminary Maps of Quaternary Deposits and Liquefaction Susceptibility in the Nine-County San Francisco Bay Region. United States Geological Survey.

7. Greenhouse Gas Emissions

Project Activities Likely to Create an Impact:

The Post-Closure Permit project activities that could create an impact on greenhouse gas (GHG) primarily include the West Basin activities: backfilling the basin with 17,500 cubic yards of soil from an on-site borrow area located approximately one mile from the basin. This project aspect is expected to last approximately two weeks. GHG emissions from the West Basin activities have been estimated, and it has been determined that these activities will not create a significant contribution to GHG emissions. Emissions generated by soil cap maintenance equipment (weed abatement) will be confined to the open, well-ventilated open space area which constitutes the area subject to the Post-Closure Permit and do not have the potential to create a significant impact. Therefore, they are not discussed further in this section.

Description of Baseline Environmental Conditions:

The Site is located within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). The BAAQMD is responsible for enforcing air quality standards within its jurisdiction established by the California Air Resources Board (CARB) and the federal Environmental Protection Agency (EPA). According to the BAAQMD website

(http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm), the air quality in the BAAQMD is currently not in attainment with California Standards for particulate matter (PM) 2.5 and PM10, or ozone.

Air Emission Estimates

Table 1 summarizes the air emissions associated with the Post Closure Plan. Total daily emissions for all pollutants are less than the BAAQMD's thresholds. Even when a project's emissions do not exceed any of the BAAQMD thresholds, BAAQMD requires that a project implement certain basic construction control measures (BAAQMD, 2010). Consequently, this project incorporates the basic construction control measures recommended by the BAAQMD as discussed in Section 3, "Air Resources Section" of this Initial Study.

Table 1. Closure Plan Air Emissions (pounds per day)

Pollutant	ROG	NOx	PM10	PM2.5
Part 1	3.0	23.1	2.2	1.5
Part 2	4.6	42.1	11.8	3.8
Part 3	4.5	41.0	11.8	3.7
BAAQMD Threshold	54	54	82	54
Exceed Threshold?	No	No	No	No

Notes: Emissions were estimated using the URBEMIS2007 model and are based on the estimated work schedule and type of equipment that are noted in the *Project Activities Section* of this document. ROG – reactive organic gases, NOx – oxides of nitrogen, PM10 – particulate matter less than 10 microns in diameter, PM2.5 – particulate matter less than 2.5 microns in diameter.

Greenhouse Gas Emissions

The URBEMIS2007 modeling results as described above in Table 1 found that the Post Closure Plan would generate 35.8 metric tons CO_2 per year. BAAQMD has developed CEQA significance thresholds of 10,000 metric tons per year CO_2 for stationary sources and 1,100 metric tons CO_2 per year for non-stationary sources. BAAQMD has not established significance thresholds for construction activities. The West Basin activities' emissions of 35.8 metric tons CO_2 per year are substantially below the two CO_2 significance thresholds established by BAAQMD. Consequently, no mitigation measures are needed to reduce the Post Closure Plan's GHG emissions.

Analysis as to whether or not project activities would:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact Analysis:

As noted above, the project's emissions of 35.8 metric tons CO_2 per year are substantially below the two CO_2 significance thresholds established by BAAQMD.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Impact Analysis:

As noted above, the project's emissions of 35.8 metric tons CO_2 per year are substantially below the two CO_2 significance thresholds established by BAAQMD. Based on this analysis, the proposed project would not conflict with

any applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of greenhouse gases.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Bay Area Air Quality Management District (BAAQMD). *Updated CEQA Guidelines*. Found at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines_June%202010.ashx. June 2010.

8. Hazards and Hazardous Materials

Project Activities Likely to Create an Impact:

None

Description of Baseline Environmental Conditions:

In accordance with the June 17, 2003, Corrective Action Consent Agreement entered into with DTSC, DuPont is conducting studies and evaluating resulting data to assess potential interim measures that will be used whenever possible to control or abate immediate threats to human health and/or the environment, and to prevent and/or minimize the spread of hazardous materials while long-term corrective action alternatives are being evaluated. To the south of the regulated units are former manufacturing areas that have been closed and decommissioned since 1999. These are believed to be the source of contaminants of concern in groundwater, which flows generally north. While the DuPont manufacturing facility was regulated as a generator of hazardous waste when it was fully operational, all hazardous waste generation, treatment and storage halted with the closure of the manufacturing units. The only hazardous waste presently generated at the Facility is small quantities of materials generated during investigations and routine groundwater monitoring events.

Analysis as to whether or not project activities would:

a. Create a significant hazard to the public or the environment throughout the routine transport, use or disposal of hazardous materials.

Impact Analysis:

No hazardous materials will be brought onto the Site during Post-Closure Permit activities. Based on Site security, personnel training, and health risk for the Site, impacts to the environment are not anticipated.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Impact Analysis:

Please see response to item a. Accident conditions are not anticipated due to safety controls at the project Site. During groundwater sampling and water level measurements, the groundwater wells are inspected. Workers at the DuPont facility handling hazardous materials are trained pursuant to federal Occupational Safety Health Agency (OSHA) and California Code of Regulations Title 8, Cal OSHA requirements. DuPont will comply with its Site Health and Safety Plan (HSP) when undertaking hazardous work. The purpose of the HSP is to describe the controls and procedures that will be implemented to minimize any incidents, injury, and health risks associated with project

activities. The HSP was prepared according to OSHA and hazardous waste management requirements. In the HSP are the appropriate engineering and administrative controls at the project Site, such as dust suppression measures, perimeter monitoring, traffic-safety planning, spill prevention, and contingency planning.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school.

Impact Analysis:

There are no schools within one-quarter mile of the regulated units. No hazardous emissions are anticipated from Site. The only hazardous waste anticipated for the proposed Post-Closure Permit activities is small quantities of materials generated during groundwater monitoring events. These materials shall be handled in accordance with DuPont's approved Waste management Plan and will not have the potential to create a significant impact. None of the hazardous waste generated or contaminants of concern at the Site are considered acutely hazardous.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to public or the environment.

Impact Analysis:

The Cal EPA Hazardous Waste and Substances Site List (Cortese List) was reviewed, and the Oakley Site is not listed.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

e. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.

Impact Analysis:

DuPont has an Emergency Action Plan for the facility. The plan includes spill and fire prevention control measures for all hazardous waste management units, general preparedness and prevention procedures, emergency coordinator, and incident command information, and the procedures for documenting and notifying appropriate agencies of releases.

The project activities will not interfere with an emergency response plan. The regulated units are located in a remote area of the facility, removed at least 300 feet from the nearest persons not directly involved with activities subject to the post-closure activities. The access roads to the Site are not used for general plant traffic and therefore in no way interfere with any traffic movement within the DuPont Site. Facility staff will provide access to all emergency personnel from all public agencies during the project.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Cal EPA web site: http://www.calepa.ca.gov/SiteCleanup/CorteseList

Corporate Remediation Group (CRG); "Draft Post Closure Permit Application for DuPont Oakley Site", Oakley, California; November, 2005.

URS; "Draft Post Closure Permit Application for DuPont Oakley Site", Oakley, California; December, 2009.

URS; "Post Closure Permit Application for DuPont Oakley Site", Oakley, California; March 2011.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; July 2011.

Corporate Remediation Group (CRG); Health and Safety Plan for General Site Activities; May 2007

DuPont; DuPont Oakley Site Emergency Action Plan; February 20, 2004

9. Hydrology and Water Quality

Project Activities Likely to Create an Impact:

None

Description of Baseline Environmental Conditions:

Major surface water features associated with the Site include the Sacramento-San Joaquin Delta (which includes the San Joaquin River), Little Break area, Central Slough, and adjacent marinas.

The Delta lies at the confluence of the northward-flowing San Joaquin River, southward-flowing Sacramento River, and upper end of the San Francisco Bay estuary. Local tides exhibit a mixed semidiurnal cycle wherein the two high and the two low tides are of unequal height. Typical surface water levels near the Site vary fairly significantly during each tidal cycle, typically there is tidal amplitude of three to five feet, but this range can be higher.

Freshwater flow is highly variable both within and among years, and has been heavily altered by dams and diversions. The principle flow variables in the Delta are as follows: (1) freshwater inflow; (2) export flow (for agricultural and municipal consumption); and (3) net Delta outflow. According to DWR (1995), the average annual inflow to the Delta was 27,840 thousand acre-feet (TAF) from 1980-1991, with outflow to the San Francisco Bay of 21,020 TAF.

The magnitude of average Delta outflows relative to the average tidal flows at the Golden Gate and Chipps Island is, however, small. During periods of significant water withdrawal from pumping stations in the vicinity of the Site, flow reversal in the San Joaquin River may occur, particularly during incoming tides. Much of the land within the Delta is below sea level and relies on levees for protection against flooding. Flood flows reaching the Delta have been estimated to exceed 600,000 cubic feet per second (DWR, 1995). The predicted 100-year flood stage elevation in the vicinity of the Site is approximately 6.5 feet above MSL. The San Joaquin River, which borders the Site to the north, accounted for approximately 4,300 TAF (25%) of the average inflow to the Delta from 1980-1991 (DWR, 1995). Water depth varies from MSL at the shoreline to about 40 feet below MSL at the dredged ship channel.

The Little Break area in the northeastern quarter of the DuPont site was historically open water of the San Joaquin River. Subsequent to the area being levied and filled, the lower portions of the basin were inundated with water after the levee was breached. Eventually its current structure of a perimeter levee and smaller islands of emergent vegetation were created. This marsh area is heavily vegetated with tules and other marsh-type vegetation. While a portion of this marsh area is at or near sea level and is inundated at high tide, the majority of the marsh is between one and three feet MSL in elevation and is inundated only during unusually high tide and flood events. Water depths range from ¼- to 1-foot mean lower low water (mllw – the typical low point of the tidal cycle) in the interior of Little Break to 2 feet mllw at the inlet.

The Central Slough consists of a main channel and several smaller channels and trenches surrounded by wetlands. The water body is shallow and may be minimally affected tidally. The Central Slough is connected to Little Break by a surface water conveyance system consisting of mostly of open canals/ditches, with culverts emplaced to permit flow underneath above-ground obstructions. A flapper gate is located at the eastern edge of Central Slough, designed to allow surface water from the Little Break area to enter the Central Slough (but not vice versa).

The adjacent marinas are embayments that have been dredged approximately 20 feet into the soil. Boring logs of soil borings adjacent to the Lauritzen Yacht Harbor indicate that approximately one to two feet of clay exists between the bottom of the marina excavation and the top of the Upper Aquifer.

Analysis as to whether or not project activities would:

a. Violate any water quality standards or waste discharge requirements.

Impact Analysis:

The sampling and testing of groundwater under the CACA (HWCA P2-02/03-005) does not introduce chemical compounds that would violate any water quality standards. Groundwater purged for the monitoring wells is handled in accordance with the DTSC-approved Waste Management Plan for the Facility. All purge water is disposed of at an off-site disposal facility. No change in water quality standard would occur as a result of the Post-Closure Permit activities. The activities proposed will not change the Site's current waste discharge requirements.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficient in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

Impact Analysis:

The Post-Closure Permit requires DuPont to record a land use covenant that will place restrictions on groundwater extraction and building construction and/or occupancy. The filling of the West Basin is not expected to significantly interfere with groundwater recharge as no permanent asphalt or concrete cap construction is proposed. Although the West Basin will be filled with loose soil, the area proposed for backfilling is less than two acres and no significant change in drainage pattern is anticipated. The activities associated with soil cover maintenance and inspections will not have the potential to create a significant impact in regards to depletion groundwater supplies or interfere substantially with groundwater recharge as these activities will not require extraction of groundwater.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off-site.

Impact Analysis:

Currently the West Basin seasonally fills with rainwater; however, stormwater generated across the DuPont Oakley Site does not flow into the West Basin. While the Permit requires backfilling the West Basin with clean soils, the area involved is relatively small and would not change site-wide or area drainage patterns. The activities associated with routine soil cover maintenance and inspections will not require altering a stream or river course that would cause substantial erosion or siltation on or off-site.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner resulting in flooding on or off-site.

Impact Analysis:

Although the West Basin will be filled to ground surface with clean loose soil, the area proposed for backfilling is less than two acres and will not include asphalt or concrete caps. The proposed backfilling activities will not significantly change existing drainage patterns for the Site. An increase, if any, in the rate or amount of surface runoff would not substantially increase the rate or amount of existing surface runoff in a manner resulting in flooding on or off-site. The activities associated with routine soil cover maintenance and inspections will not require altering a stream or river course that would result in flooding on or off-site.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

Impact Analysis:

The Site is adjacent to existing wetland and near the San Joaquin River which have capacities to accept runoff far exceeding any minor additional runoff, if any, produced by the backfilling of the West Basin. The Post-Closure Permit activities would not create or contribute runoff water which would exceed the capacities of the wetlands or the San Joaquin River. There are no planned storm water drainage systems for this area as it will remain open space. The insignificant runoff, if any, produced by the backfilling of the West Basin will not provide a substantial additional source of polluted runoff as the backfill will consist of clean soils, and no fertilizers or pesticides will be used in the future for this area. The routine soil cover maintenance and inspections will not generate water that would cause exceedances to the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

f. Otherwise substantially degrade water quality.

Impact Analysis:

Following the backfilling of the West Basin, the insignificant runoff, if any, will not provide a substantial additional source of polluted runoff. The backfill will consist of clean soils, and no fertilizers or pesticides will be used in the future for this area. Degradation of water quality would not result from the routine soil cover maintenance and inspections associated with Post-Closure Permit activities as no chemicals are used to perform these duties.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

g. Place within a 100-flood hazard area structures which would impede or redirect flood flows.

Impact Analysis:

The development of structures is not part of the Post-Closure Permit.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

h. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

Impact Analysis:

The West Basin does not receive run-off waters from the DuPont Oakley Site. The proposed backfilling activities will not significantly change existing drainage patterns for the Site. An increase, if any, in the rate or amount of surface runoff would not substantially increase the rate or amount of existing surface runoff in a manner resulting in flooding on or off-site. The routine soil cover maintenance and inspections will not generate the quantities of water that would constitute a flood risk. Therefore, the proposed activities would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

i. Inundation by sieche, tsunami or mudflow.

Impact Analysis:

The proposed West Basin backfilling activities will not significantly change existing drainage patterns for the Site. While elevations in the Delta area are low, the Site is located significantly inland. In the unlikely event of an inundation by seiche, tsunami, or mudflow, the regulated units were closed and all contaminant of concern removed in the early 1980s and therefore these geologic phenomena would not inadvertently spread any contaminants. Additionally, no structures are proposed to be built over the regulated units. The routine soil cover maintenance and inspections will not change the appearance of Ste surfaces and will not introduce chemicals such that inundation by sieche, tsunami or mudflow during these activities would cause an inadvertent spread of any contaminants.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

References Used:

Corporate Remediation Group (CRG); "Draft Post Closure Permit Application for DuPont Oakley Site", Oakley, California; November, 2005.

URS; "Draft Post Closure Permit Application for DuPont Oakley Site", Oakley, California; December, 2009.

URS; "Post Closure Permit Application for DuPont Oakley Site", Oakley, California; March 2011.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; July 2011.

DWR, 1995. Sacramento – San Joaquín Delta Atlas. California Department of Water Resources, Division of Planning and Local Assistance, Office of Water Education, and DWR Photography. Reprinted July 1995.

10. Land Use and Planning

Project Activities Likely to Create an Impact:

Project activities would not impact land use or planning at or near the project Site. The Post-Closure Permit will include a special condition that requires DuPont to record a land use covenant for the Site that will place restrictions on groundwater extraction and building construction and/or occupancy.

Description of Baseline Environmental Conditions:

The project Site is located in the city of Oakley in Contra Costa County. The city was incorporated in 1999. Before that time, the Site was considered part of the city of Antioch. DuPont's manufacturing facility at the Site operated until 1999. At the height of its operation, the facility employed nearly 600 people. Of the original 552 acres owned by DuPont, approximately 176 acres adjacent to the San Joaquin River are marshland (tidal wetlands). The remaining areas of the facility were used as a chemical manufacturing plant that produced chlorofluorocarbons (CFCs), fuel-additive anti-knock compounds (AKCs), and titanium dioxide (TiO2), and as farmland. A parcel of approximately 170 acres (to the south of the project Site) was sold to Cline Cellars for grape production,

The DuPont Oakley Site is located in an area that is designated as the Northwest Oakley Planning Area, a Special Planning Area of the city of Oakley. The area has historically been dominated by heavy industrial uses, predominantly the DuPont facility. The area is also part of the city's Redevelopment Plan. According to the city's Community Development Department, although the DuPont Oakley Site is currently zoned for heavy industrial use, it is likely to be converted to a light industrial use designation. The city's General Plan 2020 envisions the surrounding uses for the area to be a mix of light industrial, light manufacturing and a business park, and research and development offices. The only residence near the Site is located approximately 300 feet away at the Lauritzen Yacht Harbor (LYH). The LYH may potentially include higher-density residential construction in the future. The nearest residential community is located at least 4500 feet east of the project Site. In the future, public access will be allowed throughout the Site and provide recreational use walking trails along the edge of the wetlands areas to the north and east of the Site.

Analysis as to whether or not project activities would:

a. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Impact Analysis:

The Post-Closure Permit requires backfilling of the West Basin and post-closure care of all six units. It also requires DuPont to record a land use covenant for area of the Site regulated by the Permit that will place restrictions on groundwater extraction and building construction and/or occupancy. Planned development of the regulated units will include open space and public access trails and therefore would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

b. Conflict with any applicable habitat conservation plan or natural community conservation plan.

Impact Analysis:
Planned development of the regulated units will include light industrial, open space, and public access trails and therefore would not conflict with any applicable habitat conservation plan or natural community conservation plan.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

A. 2002. City of Oakley 2020 General Plan

11. Mineral Resources

Project Activities Likely to Create an Impact: None.

No adverse impacts to mineral resources are anticipated as a result of the proposed project.

Description of Baseline Environmental Conditions:

Geological reports to date have not revealed the existence of any mineral resources at the project Site. No further analysis is deemed to be necessary.

Analysis as to whether or not project activities would:

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

Impact Analysis:

Not applicable.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Impact Analysis:

Not applicable.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

CDMG 1987a. Geological Map of the Sacramento Quadrangle, California. 1:250,000. California Department of Mines and Geology.

CDMG 1987b. Geological Map of the San Jose Quadrangle, California. 1:250,000. California Department of Mines and Geology.

12. Noise

Project Activities Likely to Create an Impact:

Operation of heavy equipment during excavation and filling activities will create temporary impacts over two separate 5-day estimated periods and one estimated ten-day period as described in the *Project Activities* section. Noise generated by the use of soil cap maintenance equipment (weed abatement will be limited in duration, and involve vehicles and equipment that would not likely generate noise levels above minimum short duration decibel standards. The scheduled annual and bi-annual maintenance operations are expected to occur indefinitely beyond the ten (10)-year duration of the Permit until such time that established groundwater cleanup standards are obtained.

Description of Baseline Environmental Conditions:

City of Oakley Noise Standards

The City of Oakley's 2020 General Plan Noise Element includes noise performance standards for new projects affected by or including non-transportation noise sources. Table 1 summarizes those standards.

Table 1. Oakley Noise Standards

Noise Level Descriptor	Daytime (7 am to 10 pm)	Nighttime (10 pm to 7 am)
Hourly Leq, dB	55	45
Leq – average sound level over a specified period dB – decibels Noise standards are based on City of Oakley 2020 General Plan Noise Element.		

West Basin Backfilling Noise Evaluation

There is a single residence at the Lauritzen Yacht Harbor 300 feet west of the project Site. The next closest group of residences to the project Site are approximately ½ mile south between SR 160 and Bridgehead Road. Since these residences are close to SR160, noise from West Basin backfilling activities at the project Site would not be detectable because of SR160 traffic noise. The next closest residential area is located approximately 1 mile southeast of the West Basin south of the Big Break Marina. At this distance, noise associated with West Basin backfilling activities would not be detectable.

The largest potential noise issue is the use of construction equipment during West Basin backfilling activities that could potentially disturb individuals trying to sleep overnight in the residence at the Lauritzen Yacht Harbor. This noise could be an issue if backfilling activities were to occur during the night.

Noise Controls

The primary noise project control will involve limiting West Basin backfilling activities to between 8 am and 6 pm on weekdays. The West Basin backfilling activities are planned to occur for two weeks. No backfilling activities would occur on weekends. The noise control will avoid significant noise impacts as follows.

First, by limiting activities to a 10-hour period on weekdays, West Basin backfilling activities would not cause or contribute to violations of Oakley's nighttime Leq shown in Table 1.

Second, these activities that would occur during this 10-hour work period may be detectable at the Lauritzen Yacht Harbor. However, the noise at this residence would only occur during daytime hours, would not disturb sleep, and would be unlikely to violate Oakland's noise ordinance. Project noise would not be detectable at the next closest group of permanent residences, which are ½ mile from the project site.

Consequently, the West Basin backfilling activities will not likely violate Oakley's daytime or nighttime Leq noise standards. Thus, by limiting West Basin backfilling activities to 8 am to 6 pm on weekdays, noise impacts will be less than significant.

Analysis as to whether or not project activities would result in:

a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Impact Analysis:

The West Basin backfilling activities are not expected to violate Oakley's daytime or nighttime Leq noise standards. Scheduled annual and bi-annual maintenance operations will not generate significant noise. The equipment used during maintenance operations is significantly less than that used during backfilling activities. Thus, by limiting West Basin backfilling activities and general maintenance activities to 8 am to 6 pm on weekdays, noise impacts will be less than significant.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

b. Exposure of persons to or generation of excessive groundbourne vibration or groundbourne noise levels.

The Noise Evaluation provided above and in the referenced *SWMU 4.2 (West Basin) Closure Plan* discusses potential noise levels, conformance with City of Oakley Noise Standards and an appropriate and adequate Noise Control Plan for the level of activities described.

Impact Analysis:

Scheduled annual and bi-annual maintenance operations will not generate significant noise. The equipment used during maintenance operations is significantly less than that used during West Basin backfilling activities. Both activities will be conducted between 8AM and 5PM on weekdays and will conform to the City of Oakley Standards as discussed above and in the *SWMU 4.2 (West Basin) Closure Plan*.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

c. A substantial permanent increase in ambient noise levels in the vicinity above levels existing without the project.

Impact Analysis:

Scheduled annual and bi-annual maintenance operations will not generate permanent increase in noise levels. The equipment used during maintenance operations is significantly less than that used during the West Basin backfilling activities. Both activities will be conducted between 8AM and 5PM on weekdays and will conform to the City of Oakley Standards as discussed above and in the *SWMU 4.2 (West Basin) Closure Plan.*

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Impact Analysis:

Scheduled annual and bi-annual maintenance operations will not generate permanent increase in noise levels. Mowing of cap vegetation may temporarily increase ambient noises levels. The equipment used during maintenance operations is significantly less than that used during the West Basin backfilling activities. Both will be conducted between 8AM and 5PM on weekdays and will conform to the City of Oakley Standards as discussed above and in the *SWMU 4.2 (West Basin) Closure Plan*.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

References Used:

2002. City of Oakley 2020 General Plan

National Cooperative Highway Research Program, 1999.

URS; "Post Closure Permit Application for DuPont Oakley Site – Appendix C, SWMU 4.2 (West Basin) Closure Plan", Oakley, California; March 2011.

13. Population and Housing

Project Activities Likely to Create an Impact: None.

No activities associated with the project would result in any adverse impacts to population and housing.

Description of Baseline Environmental Conditions:

The zoning designation for the project Site is currently heavy industrial. The surrounding area is also zoned for industrial and commercial uses. Only one residence is located in the area (300 feet from the regulated units). No residential developments are planned for the project vicinity; however, future use of the LYH property (adjacent to the Site) may potentially include higher-density residential development.

Analysis as to whether or not project activities would:

a. Induce substantial population growth in area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

Impact Analysis:

The city of Oakley's Redevelopment Plan and General Plan 2020 incorporates plans for commercial development in the area. The Post-Closure Permit alone would have no effect on growth.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

Impact Analysis:

No housing would be relocated as a result of the Post-Closure Permit.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Impact Analysis:

People would not be displaced by any activities associated with the Post-Closure Permit.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

2002. City of Oakley 2020 General Plan

Corporate Remediation Group (CRG); "Draft Post Closure Permit Application for DuPont Oakley Site", Oakley, California; November, 2005.

URS; "Draft Post Closure Permit Application for DuPont Oakley Site", Oakley, California; December, 2009.

URS; "Post Closure Permit Application for DuPont Oakley Site", Oakley, California; March 2011.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; July 2011.

14. Public Services

Project Activities Likely to Create an Impact:

No public services would be impacted as a result of the proposed project.

Description of Baseline Environmental Conditions:

The Site can be accessed on paved and gravel roads, and access to the Site for emergency vehicles is easy. Police protection in the vicinity is provided by the Oakley Police Department at 210 O'Hara Avenue. Oakley Disposal Service provides garbage recycling and green waste collection service. The Ironhouse Sanitary District operates the city's sewer system and a facility to treat and dispose of wastewater. No impact to public services would result from the proposed Post-Closure permit activities.

Analysis as to whether or not project activities would:

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

- ❖ Fire protection
- ❖ Police protection
- ❖ Schools
- ❖ Parks
- ❖ Other public facilities

Impact Analysis:

The Post-Closure Permit activities would not require new demand for facilities or public services' personnel. Because there are no residential uses in the project vicinity, schools would not be affected. Waste generated at the Site would be minimal and would be transported to the appropriate facility in the area. Existing public facilities would be adequate to serve the needs of the proposed project.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Corporate Remediation Group (CRG); "Draft Post Closure Permit Application for DuPont Oakley Site", Oakley, California; November, 2005.

URS; "Draft Post Closure Permit Application for DuPont Oakley Site", Oakley, California; December, 2009.

URS; "Post Closure Permit Application for DuPont Oakley Site", Oakley, California; March 2011.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; July 2011.

15. Recreation

Project Activities Likely to Create an Impact:

No proposed activities are likely to result in adverse impacts to recreation within the vicinity of the project.

Description of Baseline Environmental Conditions:

Recreational resources exist along the San Joaquin River delta. However, these resources are north of the proposed project Site and would not be impacted by the proposed project. No project activities would increase demand for recreational facilities or otherwise affect recreational facilities.

Analysis as to whether or not project activities would:

a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

Impact Analysis:

The Post-Closure Permit activities would not affect the use of parks or other recreational facilities such that substantial physical deterioration of a facility would occur or be accelerated.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

b. Include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Impact Analysis:

The Post-Closure Permit activities would not include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Corporate Remediation Group (CRG); "Draft Post Closure Permit Application for DuPont Oakley Site", Oakley, California; November, 2005.

URS; "Draft Post Closure Permit Application for DuPont Oakley Site", Oakley, California; December, 2009.

URS; "Post Closure Permit Application for DuPont Oakley Site", Oakley, California; March 2011.

16. Transportation and Traffic

Project Activities Likely to Create an Impact:

Temporary construction equipment and workers will be entering the Site for activities associated with the backfilling of the West Basin. Backfilling of the West Basin will take approximately two weeks; however, heavy equipment will remain on-

site during the backfilling activities and will not affect local traffic. No soil hauling trucks will be used for the West Basin backfilling activities.

Description of Baseline Environmental Conditions:

Since the Site formerly functioned as an active industrial complex, the highways and roads are fully capable of handling any traffic associated with the Post-Closure Permit. Peak traffic hours on highways and roads near the facility are generally between 0700 to 0900 hours and 1600 to 1800 hours. However, even the peak traffic hours are not all that heavy because the facility is no longer in operation and the only business located near the Site is the Lauritzen Yacht Harbor which does not have a peak traffic pattern associated with it. Both paved and unpaved roads are present at the Site. The DuPont facility is served by major thoroughfares that used to handle substantially more facility related traffic when the facility was active. In addition, the facility is not situated within densely populated areas. A Level of Service (LOS) is a qualitative description of traffic congestion according to volume-to-capacity ratios calculated for road segments or intersections. Intersection levels of service range from LOA A, which indicates free flow or excellent conditions with short delays, to LOS F, which indicates congested or overloaded conditions with extremely long delays. The September 2008, East Contra Costa BART Extension Draft Environmental Impact Report provided by the Contra Costa County Transportation Planning Department, states that comparative roadways (measured SR 4 Westbound Ramps and Main Street, Main Street and SR 160 Northbound, and Main Street/Neroly Road and Bridgehead Road) have LOS between C and D. LOD C and D indicate typical traffic flow with moderate delays and some delays, respectively.

Analysis as to whether or not project activities would:

a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).

Impact Analysis:

Very little additional traffic is anticipated. The construction sequence and duration is discussed in the *Project Activities* section starting on page 5 of this document. Mobilizations and demobilizations of the limited list of equipment will occur for each stage of construction. During construction activities, workers will enter and leave the area using personal vehicles, and since there will only be 4 to 6 additional workers, this will not adversely impact traffic within the vicinity of the Site. As noted in the *Project Activities* section, construction equipment during construction activities will only be operated within the mostly vacant Facility Site and will not use public roads to transport fill soils. Based on the project plan and limited list of construction equipment and additional employees, there is no need to avoid peak traffic, and normal traffic patterns will not be affected.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

b. Exceed, either individually or cumulatively, a level of service standard established by the country congestion management agency for designated roads or highway.

Impact Analysis:

The construction sequence and duration is discussed in the *Project Activities* section starting on page 5 of this document. Mobilizations and demobilizations of the limited list of equipment will occur for each stage of construction. During construction activities, workers will enter and leave the area using personal vehicles and since there will only be 4 to 6 additional workers, this will not adversely impact traffic within the vicinity of the Site. As noted in the Project Activities section, construction equipment during construction activities will only be operated within the mostly vacant Facility Site and will not use public roads to transport fill soils. Based on the project plan and limited list of construction equipment and additional employees, there is no need to avoid peak traffic and normal traffic patterns will not be affected.

The Site is on the grounds of a former manufacturing facility that is no longer in use. As such, the limited traffic anticipated during Post–Closure Permit activities would not result in any adverse impacts, either individually or cumulatively, to traffic or levels of service along existing roadways.

Therefore, the level of service standard established by the country congestion management agency for designated roads or highway will not either individually or cumulatively be significantly impacted.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

c. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact Analysis:

There will not be an increased hazard due to design features or incompatible uses. Existing roadway systems are not being modified by this work. The Site is mostly vacant, and the proposed use is not incompatible with present Site uses.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

d. Result in inadequate emergency access.

Impact Analysis:

The proposed activities will not have an impact on emergency access. The West Basin construction site does not block or impede emergency access to or from the Site. Daily construction traffic will consist of personal vehicles entering through the front plant gate, parking adjacent to the Site administrative building and leaving through the front gate. Since this traffic is limited to few vehicles, they will not impact off-site traffic flow or impede emergency access.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

e. Result in inadequate parking capacity.

Impact Analysis:

The Post-Closure Permit activities will not affect parking capacity. Construction operator traffic for the four to six weeks of West Basin backfilling activities will consists of 4 to 6 vehicles. Since the Site administrative building and area adjoining the West Basin contains more than enough vacant parking spaces, parking on-site is not affected.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

f. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Impact Analysis:

The Post-Closure Permit will not conflict with any plans, policies or programs in place for the project Site. Project activities are not located with an area that will disrupt local public transportation or reduce support involving alternative transportation routes or equipment.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

September 2008, East Contra Costa BART Extension Draft Environmental Impact Report provided by Contra Costa County Transportation and Planning

Corporate Remediation Group (CRG); "Draft Post Closure Permit Application for DuPont Oakley Site", Oakley, California; November, 2005.

URS; "Draft Post Closure Permit Application for DuPont Oakley Site", Oakley, California; December, 2009.

URS; "Post Closure Permit Application for DuPont Oakley Site", Oakley, California; March 2011.

URS; "Post-Closure Permit Application for DuPont Oakley Site", Oakley, California; July 2011.

17. Utilities and Service Systems

Project Activities Likely to Create an Impact:

No proposed activities are likely to result in adverse impacts to utilities and service systems within the vicinity of the project.

Description of Baseline Environmental Conditions:

The City of Oakley provides residents with residential and commercial garbage, recycling, and green waste collection and recycling service. Sewer service is provided by the Iron House Sanitary District. The Iron House Sanitary District handles the wastewater treatment needs for the City of Oakley. Water is provided to the Site by the Diablo Water District. Electricity is provided to the Site by the Pacific Gas and Electric Company. Contractors will have access all utilities when performing the West Basin backfilling activities.

Analysis as to whether or not project activities would:

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Impact Analysis:

No treatment of wastewater is proposed for the Post-Closure Permit. Wastewater treatment is not performed at the covered Ponds and Basins. The West Basin only includes storm water and does not contain contaminants of concern. Water in the basin will be pumped from the southern half of the West Basin to the northern half. West Basin activities will involve moving the stormwater within the basin as backfilling activities progress northward and allowing excess water to equilibrate with groundwater levels. However, any water pumped from the basin will be subject to waste management requirements, as appropriate.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact Analysis:

No new wastewater treatment facilities or expansion of existing facilities will be necessary to conduct this project. The city of Oakley's existing wastewater treatment facility, Iron House Sanitary District, has sufficient capacity to handle any wastewater generated from the Post-Closure Permit activities which will be relatively minimal.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact Analysis:

No construction or modification to existing storm-water drainage facilities would be required for the proposed project.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.

Impact Analysis:

Municipal water supplies would be sufficient to address the Post-Closure Permit's activity needs. No long-term water supplies would be required for these activities. Water trucks with a sufficient capacity of 4000 gallons will be used to control dust during the West Basin backfilling activities.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

e. Result in determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments.

Impact Analysis:

It is not anticipated that the Site will generate any wastewater during West Basin backfilling activities. As stated in the *Project Activities* section starting on Page 5 of this document, water within the ponds will be allowed to evaporate and will not be transported from the Site.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

f. Be served by a landfill with sufficient permitted capacity to accommodate the projects solid waste disposal needs.

Impact Analysis:

A waste management plan (WMP) is provided in the referenced *SWMU 4.2 (West Basin) Closure Plan*. Anticipated waste streams and estimated volumes are noted in the WMP, as attached in the table below. DuPont will contract for

disposal at DuPont with DuPont approved vendors with capacity and regulatory permitting to receive the classifications of waste to be disposed.

Anticipated Waste Streams

Waste Stream	Proposed RCRA Classification	Anticipated Waste Characterization Testing	Container Requirements and Estimated Volume	Labeling Requirements	Anticipated Disposal Method
Pressure treated lumber	Alternative management standard for Treated Wood Waste (TWW)	None	20 yd3, place in lined, tarped, 20 cubic yard (cuyd) roll off box	Treated Wood Waste – Do not burn or scavenge	Offsite disposal at an authorized TWW facility
Metal (structural steel, misc steel, pump machinery, electrical cable, lighting components)	Exempt from RCRA	None	40 yd3, place in 20 cuyd roll off box	None	Metals recycling
Metal (electrical cable)	RCRA non-regulated	None	20 yd3, stockpile for pickup by recovery contractor	None	Copper recovery
Non recoverable demolition debris including building debris, plastic, untreated wood, PVC piping, concrete, and trash	C&D Debris	None	40 yd3 to be placed in roll-off boxes. May be combined with plastic from water treatment system	Green Non-Hazardous waste	Landfill at DuPont-audited facility
Vegetation surrounding pond	RCRA non-regulated based on generator knowledge	None	Stockpile	None	Bury in the bottom of the pond.
Vineyard grape vines	RCRA non-regulated based on generator knowledge	None	20 yd3, passed through a wood chipper, placed in lined, tarped 20 cu yd roll off box	None	DuPont approved disposal facility

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

g. Comply with federal, state, and local statutes and regulations related to solid waste.

Impact Analysis:

A waste management plan (WMP) is provided in the *SWMU 4.2 (West Basin) Closure Plan*. Anticipated waste streams and estimated volumes are noted in the WMP, also as shown in the table in subsection f above. DuPont will contract for disposal with approved vendors with the capacity and regulatory permitting to receive the classifications of waste to be disposed.

Solid waste will be handled as specified in the Investigation and Remediation Waste Management Plan for the DuPont Oakley Facility which adheres to all federal, state, and local statutes. Solid waste generated from the Post-Closure Permit activities would not likely be hazardous. DuPont would dispose of all hazardous waste through a permitted hazardous waste treatment, storage, or disposal facility, as warranted. Non-hazardous waste would be transported to the nearby landfill facility.

Conclusion:
☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☐ Less Than Significant Impact
☒ No Impact

References Used:

CRG 2004. Investigation and Remediation Waste Management Plan for DuPont Oakley Facility. February 27

Mandatory Findings of Significance

Based on evidence provided in this Initial Study, DTSC makes the following findings:

a. The project ☐ has ☒ does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

b. The project ☐ has ☒ does not have impacts that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

c. The project ☐ has ☒ does not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

Determination of Appropriate Environmental Document:

Based on evidence provided in this Initial Study, DTSC makes the following determination:

☒ The proposed project COULD NOT HAVE a significant effect on the environment. A **Negative Declaration** will be prepared.

☐ The proposed project COULD HAVE a significant effect on the environment. However, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **Mitigated Negative Declaration** will be prepared.

☐ The proposed project MAY HAVE a significant effect on the environment. An **Environmental Impact Report** is required.

☐ The proposed project MAY HAVE a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **Environmental Impact Report** is required, but it must analyze only the effects that remain to be addressed.

☐ The proposed project COULD HAVE a significant effect on the environment. However, all potentially significant effects (a) have been analyzed adequately in an earlier Environmental Impact Report or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier Environmental Impact Report or Negative Declaration, including revisions or mitigation measures that are imposed upon the proposed project. Therefore, nothing further is required.

Certification:

I hereby certify that the statements furnished above and in the attached exhibits, present the data and information required for this initial study evaluation to the best of my ability and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.

Preparer's Signature		Date
Peter Ruttan	Project Manager – Engineering and Special Projects Office	916-255-3630
Preparer's Name	Preparer's Title	Phone #
//Original signed by//		September 2, 2011
Branch or Unit Chief Signature		Date
Rizgar Ghazi	Unit Chief – Engineering and Special Projects Office	916-255-6665
Branch or Unit Chief Name	Branch or Unit Chief Title	Phone #

ATTACHEMENT A

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