CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
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GENERAL WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2020-0006 FOR THE MANAGEMENT AND BENEFICIAL REUSE OF PETROLEUM-IMPACTED SOILS ON ACTIVE OIL LEASE AND FEE PROPERTIES IN THE CENTRAL COAST REGION

May 28, 2020

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

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The California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board), finds that:

FINDINGS

1. Oil exploration, production, and delivery generate large volumes of waste soils at active oilfields within the jurisdictional boundaries of the California Regional Water Quality Control Board, Central Coast Region (hereafter Central Coast Water Board). Waste soils are defined as all crude-oil impacted soils generated on active oilfield leases. Sources of waste soils include, but are not limited to, tank bottom sludges, soils impacted by accidental spills, and produced sands. In addition to crude-oil impacted soils, this General Order also defines non-hazardous spent sandblasting aggregate as a waste soil.

   To manage waste soils, oilfield owners and/or operators often use waste pile management facilities (any area that waste soils are temporarily stored for the purpose of characterization, stabilization, and processing prior to beneficial reuse or off-site disposal at an appropriately permitted waste disposal facility) for the temporary storage of waste soils prior to beneficial reuse or disposal. Beneficial reuse projects are defined as the practice of using waste soils in the construction of oilfield infrastructure such as, but not limited to, road pavement and berms. If waste pile management facilities and beneficial reuse projects are constructed and managed properly, with comprehensive and clearly defined management practices to contain wastes and minimize erosion, they will not pose a significant threat to water quality.

2. These general waste discharge requirements (hereafter referred to as “General Order”) authorize the discharge of wastes related to the operation of waste pile management facilities and beneficial reuse projects on active[1] oilfield leases within the Central Coast region, as specified herein. This General Order includes provisions requiring the containment of all waste soils and/or water quality

[1] All oilfields not identified as abandoned (ABD) by the California Geologic Energy Management Division.

monitoring to demonstrate that the water quality objectives specified in this General Order are achieved.

3. This General Order authorizes beneficial reuse projects on active oilfield leases and fee properties, consistent with the provisions of this General Order. This General Order requires that waste soils not meeting the requirements defined in this General Order be disposed of at an appropriately permitted land disposal site.

4. The Central Coast Water Board's additional findings that provide rationale for these requirements are set forth in Attachment B of this General Order and are incorporated herein.

5. Oilfield owners and/or operators who were previously enrolled under General Conditional Waiver of Waste Discharge Requirements Order No. R3-2010-0036 for the Management of Petroleum-Impacted Soils at Authorized Waste Pile Management Facilities on Active Oil Leases and Fee Properties in the Central Coast Region, the Conditional Waiver of Waste Discharge Requirements Order No. R3-2010-0037 for the Reuse of Non-Hazardous Crude Oil Impacted Soil and Non-Hazardous Spent Sand Blasting Aggregate on Active Oil Leases and Fee Properties in the Central Coast Region, and Executive Officer Order No. R3-2015-0031 Extending the Termination Date of Order No. R3-2010-0036 and are seeking continued coverage under this General Order shall file a Notice of Intent (NOI) with the Central Coast Water Board within 90 days of the adoption date of this General Order. The application and enrollment process are further described in Attachment C. An oilfield owner or operator enrolled in this General Order is hereafter referred to as a "Discharger."

6. **Notification of Interested Persons.** On February 12, 2020, the Central Coast Water Board notified oilfield owners and operators and interested agencies and persons of its intent to issue General Waste Discharge Requirements for the management and beneficial reuse of petroleum impacted soils within the Central Coast Region and has provided the opportunity to review a copy of the proposed General Order and submit written views and comments during a 30-day public comment period.

7. **Public Process.** On May 28, 2020, the Central Coast Water Board held a public hearing and considered all the comments and evidence concerning this matter. Notice of this hearing was given to all known interested persons in accordance with California Code of Regulations, Title 23, Division 3, Chapter 1.5, Article 1, and section 647.2.

IT IS HEREBY ORDERED that, pursuant to Division 7 of the Water Code, including sections 13263 and 13267, all Dischargers subject to this General Order shall comply with the following:

A. PROHIBITIONS

1. The unauthorized discharge of hazardous wastes, as that term is defined in California Code of Regulations, Title 22, section 66261.1 et seq., is prohibited.

2. Any discharge of waste to land, except at a properly permitted disposal facility, that is not specifically authorized by this General Order or permitted through an order issued by the State Water Resources Control Board or the Central Coast Water Board is prohibited. Discharges to areas outside the boundary of the waste pile management facility as approved by the Central Coast Water Board's Executive Officer (Executive Officer) is prohibited.

3. The construction and operation of waste pile management facilities without the disclosure and written consent of the landowner, a copy of which must be provided to the Central Coast Water Board, is prohibited. Written consent is not required when the landowner and operator are the same entity.

4. The construction of a waste pile management facility within five feet of the highest anticipated groundwater elevation (including perched groundwater) is prohibited.

5. The construction of beneficial reuse projects without the disclosure and written consent of the landowner, a copy of which must be provided to the Central Coast Water Board, is prohibited.

6. Except when authorized by a National Pollutant Discharge Elimination System (NPDES) permit, the direct or indirect discharge of wastewater and/or stormwater from the waste pile management facility to surface waters is prohibited.

7. The discharge of waste from beneficial reuse projects to surface waters in a manner causing or contributing to an exceedance of any applicable water quality objective in the Water Quality Control Plan for the Central Coast Basin (Basin Plan) or any applicable federal water quality criteria, or a violation of any applicable state or federal policies or regulations, is prohibited.

8. The collection, storage, treatment, and beneficial reuse of waste soils on active oilfields leases and fee properties shall not result in the creation of a condition of pollution or nuisance.

9. The disposal of any waste within the waste pile management facility that does not meet the definition of waste soils in Finding 1 of this General Order, or that do not have written approval by the Executive Officer, is prohibited. This prohibition includes the placement of drums and/or containers of any liquids within the waste pile management facility.

10. Waste soils containing materials subject to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or the federal Resource Conservation and Recovery Act (RCRA), such as but not limited to, kerosene

distillate and various other refined or semi-refined hydrocarbon-based diluents, are not eligible for coverage under this General Order.

11. The discharge of radioactive substances as defined in California Code of Regulations, Title 17, section 30100 is prohibited.

12. The discharge, including overflow, bypass, seepage, erosion, sediment deposition, and over spray of solid wastes, liquid wastes, or leachate to waters of the State is prohibited.

13. This General Order prohibits the ponding of liquids within the waste pile management facility. This includes, but is not limited to, any liquids used in stabilization of the waste soils or any stormwater that has contacted waste soils. Waste soils that are imported as a slurry must be dewatered as soon as practicable. Dewatering shall not exceed 48 hours from importation of the waste soil slurry.

14. Discharge to surface drainage courses or to groundwater from beneficial reuse projects is prohibited.

15. The beneficial use of waste soils containing free liquid, determined by visual inspection or as defined by USEPA Method 9095 (paint filter liquid test), is prohibited. All free flowing and standing liquids shall be removed within 48 hours of discharge.

16. Permanent disposal (e.g., landfilling) of waste soils, other than at an off-site appropriately permitted disposal facility, is prohibited.

17. The beneficial reuse of waste soils containing substances in concentrations toxic to human, plant, animal, or aquatic life is prohibited.

18. Construction or placement of any structures on waste soils, except for the construction of waste pile management facilities constructed in accordance with findings and provisions of this General Order, is prohibited.

19. The placement of a waste pile management facility and/or a beneficial reuse project on habitat of a sensitive, special status or candidate species without proper permitting and mitigation is prohibited.

20. The discharge of waste soils shall 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.

21. The discharge of waste soils shall not conflict with any applicable habitat conservation plan or natural community conservation plan.

22. Except when a geologic investigation conducted by a California registered professional geologist has determined conditions to be safe and stable, waste pile

management facilities and beneficial reuse projects shall not be constructed on existing landslides or active erosion sites.

B. GENERAL SPECIFICATIONS

1. The Discharger shall implement water quality management practices, as necessary and appropriate, to protect water quality and ensure attainment of applicable water quality objectives.

2. If water quality monitoring demonstrates that discharges from a waste pile management facility or beneficial reuse projects have caused or contributed to an exceedance of a water quality objective, the Executive Officer may issue an order to the Discharger requiring additional or modified management practices protective of water quality.

3. The Discharger shall implement the attached Monitoring and Reporting Program (MRP) Order No. R3-2020-0006, or any individual MRP issued by the Executive Officer, to demonstrate compliance with the water quality objectives prescribed by this General Order and ensure the implementation of all necessary management practices. All technical and monitoring reports submitted pursuant to this Order are required pursuant to Section 13267 of the California Water Code. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer, may subject the discharger to enforcement action pursuant to Section 13268 of the California Water Code. The Water Board will base all enforcement actions on the date of Order adoption.

4. By **October 1st of each year**, the Discharger shall complete implementation of all necessary management practices and maintenance activities in preparation for the upcoming rainy season (October 1st through March 31st), including but not limited to:

    a. Completion of all necessary run-on and run-off diversion and erosion prevention measures.

    b. Completion of all necessary construction (grading), maintenance or repairs of precipitation and drainage control facilities.

    c. Ensure the structural integrity and effectiveness of all containment structures.

C. WASTE PILE MANAGEMENT FACILITY SPECIFICATIONS

1. Waste pile management facilities shall be constructed, maintained, and operated to contain all waste soils, including any leachate, process waters, and stormwater that has contacted waste soils, and to prevent degradation to waters of the State.

2. Existing soil lined and/or beneficial reuse material lined waste pile management facilities must be evaluated[2] by a California licensed Professional Engineer or Professional Geologist to determine if the facility provides complete containment of waste. A groundwater monitoring well installation and sampling plan must be submitted if the engineering evaluation determines the existing waste pile management facility does not provided complete containment.

3. All new waste pile management facilities shall be designed and constructed with an Executive Officer approved impermeable[3] concrete liner or an Executive Officer approved engineered alternative liner that has been demonstrated to fully contain waste soils from underlying groundwater. The design and construction of the new waste pile management facility, including the liner and any diversionary and containment structures (e.g., berms, curbing, etc.) shall be performed by a California licensed Professional Engineer or Professional Geologist.

4. Waste pile management facilities shall maintain an impervious liner to prevent infiltration of stormwater or other liquids to groundwater. Waste pile management facility liners shall be routinely inspected as required by Monitoring Requirements A.2 of the MRP and the Discharger shall notify the Central Coast Water Board of any repairs required to maintain the integrity of the liner. Damage requiring repair includes, but are not limited to, all visible erosion damage, cracking, and damage caused by heavy equipment. The Discharger shall complete repairs as soon as practicable.

5. The Discharger shall dispose of all waste soils stored within the waste pile management facility at an appropriately permitted disposal facility if coverage under this General Order is terminated. If the waste pile management facility was constructed using waste soils, the Discharger shall restore the site to the same condition prior to construction and operation of the waste pile management facility and to the Executive Officer's satisfaction.

6. Waste pile management facilities shall be designed, constructed, and maintained such that precipitation falling directly on the waste piles and/or treatment/processing areas will be contained and managed within the waste pile management facility boundaries. The Discharger shall implement management practices to effectively control run-on and contain run-off within the facility (including feedstock and product stockpile areas).

7. All liquids used within the waste pile management facility shall be limited to the minimum amount of water necessary for dust control, construction, and waste soil treatment activities. In accordance with Reporting Requirements C.3 of the MRP,

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[2] The Discharger may select to forgo the engineering evaluation and rely on a groundwater monitoring program as described in Section B.12 of Attachment C (Notice of Intent) to demonstrate compliance with the containment requirements of this General Order.

[3] A minimum hydraulic conductivity of 1×10^{-6} cm/sec.

the Discharger shall report all volumes of produced water used within the waste pile management facility.

8. Water collected in any stormwater catchment basin may be used in minimum amounts within the waste pile management facility boundary as necessary for dust control and compaction provided that the water does not infiltrate past the depth where effective evaporation can occur. Discharge of collected stormwater outside the waste pile management facility is prohibited unless the Discharger attains coverage under an NPDES permit or the collected stormwater is incorporated into the produced water disposal network and injected into an appropriately permitted Class II disposal well.

9. The Discharger shall empty precipitation and drainage control systems that collect stormwater from waste pile management facilities within 48 hours following each storm and incorporate this stormwater into the produced water tanks for future injection. If the waste pile management facility includes stormwater and/or sediment basins, the Discharger shall maintain a minimum of two feet of freeboard at all times. The Discharger shall install permanent graduated markers within the stormwater and/or sediment basins so that the depth of any liquids can be determined from outside the boundaries of the waste pile management facility.

10. At a minimum, the Discharger shall chemically characterize two samples from each waste stream[4] annually per the Executive Officer approved Waste Soil Chemical Characterization Sampling Plan as specified in Monitoring Requirements A.1 of the MRP for the purpose of determining the appropriate end use of the waste soils (i.e., which soils meet reuse standards, require offsite disposal or require further processing and treatment). The Executive Officer may require that additional samples be collected and characterized if it is determined that additional data are needed to demonstrate compliance with this General Order.

D. BENEFICIAL REUSE PROJECT SPECIFICATIONS

1. This General Order authorizes the beneficial reuse of waste soils for specified activities and as approved by the Executive Officer. The following requirements do not apply if the Discharger chooses to dispose of all waste soils off-site at an appropriately permitted disposal facility.

2. The Discharger shall submit a Site-Wide Beneficial Reuse Project Plan (reuse plan) as specified in Monitoring Requirements B.1 of the MRP for Executive Officer review and approval. The reuse plan shall document the location and type of all beneficial reuse projects, specify the individual management practices and/or “Good and

[4] This General Order defines a waste stream as the individual sources of waste soils generated at an oilfield. These sources may include, but are not limited to, oily sands, tank bottom sediment, pond clean out sediment, and petroleum-impacted soils resulting from spill or leak cleanup activities.

Workmanlike"[5] standards used for the individual project, and propose a monitoring plan to ensure that beneficial reuse projects maintain structural integrity and do not adversely impact water quality.

3. Except as exempted below, beneficial reuse projects may only be constructed on properties within the active oilfields where the waste soils were derived, or per California Code of Regulations Title 14, other active oilfield properties owned or leased by the same entity.

4. Waste soils must be chemically characterized in accordance with an approved waste soil sampling plan prior to use in a beneficial reuse project.

5. Beneficial reuse projects shall be constructed and maintained in a manner that reduces permeability, leaching, and erosion.

6. The Discharger shall not incorporate any waste, other than waste soils as defined in Finding 1 of this General Order, into beneficial reuse projects.

7. The Discharger shall mix, compact, and maintain waste soils used in beneficial use projects designed to divert or direct stormwater to minimize erosion. "Good and Workmanlike" construction will be determined by the structures ability to divert the anticipated flow with little to no erosion of the diversionary structure.

8. Beneficial reuse projects shall be designed, constructed, and maintained in accordance with federal, state, and local laws, codes, and regulations. (e.g., Fish & Game Code § 1603)

9. All waste soils used in beneficial reuse projects must have the proper engineering properties for their intended use, shall undergo the appropriate sampling protocol, and meet the appropriate standards specified in the reuse plan.

10. Beneficial reuse projects that disturb one or more acres of soil or beneficial reuse projects that disturb less than one acre but are part of a common plan development that in total disturbs one or more acres, may be required to obtain coverage under the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction Stormwater General Permit). The reuse plan shall include an evaluation to determine if the Discharger will need to enroll in the Construction Stormwater General Permit.

11. Any applicable exemption from permitting requirements for industrial facilities under the NPDES regulations does not exempt beneficial reuse projects from stormwater

[5] Good and Workmanlike Practices Guidance Handbook for Beneficial Reuse Projects and Waste Pile Management Facilities as Regulated by the Central Coast Regional Water Control Board, prepared by Tracer ES&T for the Western States Petroleum Association, October 2006. http://www.waterboards.ca.gov/centralcoast/board_decisions/adopted_orders/2010/Handbook.pdf

requirements of this General Order and/or enrollment in the Construction Stormwater General Permit when appropriate.

12. Beneficial reuse projects shall not cause or contribute to adverse water quality impacts, pollution, or a condition of nuisance.

13. Beneficial reuse projects shall not cause or contribute to an increase in concentration of waste constituents in soil-pore gas, soil-pore liquid, perched water, groundwater, or geologic materials.

14. The Discharger shall repair all visible erosion of beneficial reuse projects and implement revised management practices to minimize the threat of future erosion as soon as practicable. If modifications to the beneficial reuse project are required to minimize the threat of future erosion, the Discharger shall submit a revised reuse plan that identifies the project changes needed for Executive Officer Approval.

E. WATER QUALITY LIMITATIONS

1. This General Order requires the complete containment of wastes at the waste pile management facility, and therefore, the construction and operation of waste pile management facilities shall not adversely impact surface waters or groundwater of the State. These discharges shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Central Coast Water Board or the State Water Resources Control Board (State Water Board). These discharges shall not cause concentrations of metals, salts, chemicals, hydrocarbons, or radionuclides in groundwater underlying and down-gradient of the waste pile management facility to exceed the State Water Resources Control Board Division of Drinking Water's latest recommended Drinking Water Action Levels or Maximum Contaminant Levels (MCLs) of the California Code of Regulations Title 22, Division 4, Chapter 15, Article 5.5. Discharge of waste shall not cause the concentration of any constituents of concern or monitoring parameter to exceed its respective background value in any monitored media (e.g., surface water or groundwater) at any monitoring point pursuant to MRP Order No. R3-2020-0006.

2. The Executive Officer may require Dischargers to install groundwater and surface water monitoring devices, as deemed necessary to comply with this General Order.

3. The Discharger is responsible for all waste containment, monitoring, and maintenance. The Discharger is also responsible for correcting any problems that may arise in the future as a result of the waste discharged. This responsibility continues as long as the waste has the potential to discharge to or affect waters of the State, as determined by the Executive Officer.

4. The construction and operation of waste pile management facilities and the beneficial reuse of waste soils on active oilfield properties shall comply with all applicable requirements contained in the Basin Plan. If any applicable requirements overlap or conflict in any manner with the requirements of this General Order, the

more stringent requirement shall govern in all cases, unless specifically stated otherwise in this General Order.

F. PROVISIONS

1. The Discharger shall comply with the MRP Order No. R3-2020-0006, and any revisions thereto as specified by the Executive Officer. All applicable monitoring must begin immediately upon receipt of a Notice of Applicability (NOA) issued to the Discharger by the Executive Officer.

2. The Discharger shall maintain records of the weight and/or volume of waste soils imported to the waste pile management facility, the specific location (GPS coordinates) where waste soils were generated, the specific waste stream, and all chemical characterization data that was collected as required by this General Order.

3. The Discharger shall maintain a copy of this General Order at its local field office. A copy of this General Order shall also be kept at an on-site field office for operating personal if the local field office is not sited within the active oilfield boundary.

4. The Discharger shall furnish any information that the Executive Officer may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the applicability of this General Order. The Discharger shall also furnish to the Executive Officer, upon request, copies of records required to be kept for this General Order.

5. In accordance with Water Code section 13267(c), Central Coast Water Board and its representatives shall be allowed to:

    a. Physically access the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the provisions of this General Order.

    b. Have access to and copy any records that must be kept under the provisions of this General Order.

    c. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated under this General Order.

    d. Collect photographs and samples as needed to evaluate compliance with this General Order, or as otherwise authorized by the Water Code.

6. The Discharger shall maintain an operating record that at a minimum includes all inspections reports, all results from sampling activities, records of the volume and source of all waste soils imported to the waste pile management facility, records of all waste soils exported for disposal off-site, and records of all beneficial reuse projects. The Discharger shall furnish the operating record upon request of the Central Coast Water Board and its representatives.

7. The Discharger shall provide Central Coast Water Board with any information necessary to demonstrate compliance with this General Order within 30 days of the Central Coast Water Board's request. If the information request cannot be met within 30 days, the Discharger shall submit an alternative time schedule for Executive Officer review and approval.

8. Oilfield owners and operators seeking coverage under this General Order shall submit an NOI and technical report as described in Attachment C. Upon review and approval of the NOI and technical report, the Executive Officer will issue an NOA for coverage under this General Order.

9. For waste pile management facilities not sited atop an impermeable concrete liner, and where an engineering evaluation of the existing liner is unable to demonstrate complete containment of waste soil, the Discharger is required to submit a groundwater monitoring well installation and sampling plan as described in General Information B.12 of Attachment C.

10. If the Discharger is proposing construction of a new waste pile management facility, the NOI and technical report shall include a facility design plan that meets the specifications in the Waste Pile Management Facility Specifications of this General Order. Construction of a new waste pile management facility shall not commence until the Discharger has received written approval from the Executive Officer.

11. In accordance with Waste Pile Management Facility Specifications C.2 of this General Order, the Discharger is required to submit an engineering evaluation of an existing waste pile management facility liner and shall submit the report **within 60 days of receipt of the NOA**.

12. **Within 90 days of receipt of the NOA**, a Discharger proposing to beneficially reuse waste soils must submit a reuse plan as described in Monitoring Requirements B.1 of the MRP.

13. By April 1st of each year, the Discharger shall submit a waste pile management facility annual data submittal and inspection report, as specified in Reporting Requirements section C of the MRP for the prior calendar year. The report shall include all preparedness measures performed to ensure discharges to surface water or groundwater do not occur during the impending rainy season and ensure all relevant management practices have been successfully implemented. The report shall be submitted in accordance with MRP Order No. R3-2020-0006.

14. Filing a request by the Discharger for termination of coverage under this General Order, or notification of planned changes, does not stay any condition of this General Order.

15. **Within 60 days** following the cessation of waste pile management operations or the effective date of change in property ownership/responsibility, the Discharger shall submit a notice of termination and a facility closure report plan detailing the proposed facility closure procedures that will ensure the entire facility is restored to

its original state. Specifically, the closure report plan shall outline the proposed steps and implementation schedule to completely remove and appropriately dispose of all petroleum-impacted soils from all storage, treatment, processing areas, and beneficial reuse projects. Waste soil used in the construction of a waste pile management facility liner or beneficial reuse projects may be left in-place provided that the surface rights owner agrees with the operator in writing to accept joint and future liability, including maintenance, monitoring, and if necessary, disposal of the waste soils. Such an agreement shall not relieve the Discharger of any liability they would have had absent the written agreement. All waste soils that are removed shall be handled and disposed in accordance with applicable local and state requirements in effect at the time of such removal. For those facilities where waste soils are to be left in-place, the Discharger shall record a deed notice with the recorder of the county in which the site is located, that identifies the prior use of the property as an oilfield facility where waste soils were left in-place.

16. **Within 60 days following the restoration of the site to its original state**, the Discharger shall submit a closure report for Executive Officer review and approval. The closure report shall include a summary of all actions performed during site closure, a description of any waste soils left in place, a final reuse plan identifying the location of all beneficial reuse projects, and if applicable a copy of the deed notice.

17. The Central Coast Water Board may require any Discharger covered under this General Order to apply for and obtain individual waste discharge requirements.

18. The Discharger shall obtain all required federal, state, and local agency permits or variances prior operating the waste pile management facility and/or initiating construction of a beneficial reuse project.

19. Except for data determined to be confidential under Water Code section 13267(b), all technical reports prepared in accordance with this General Order are non-exempt public records and shall be uploaded to the California State Water Resources Control Board GeoTracker system (https://geotracker.waterboards.ca.gov/) by the Discharger.

20. Coverage under this General Order is not transferable. The Discharger shall notify the Central Coast Water Board in writing within seven days following any changes in ownership or control of leases or fee properties. To maintain regulatory coverage, the prospective new owner or operator shall submit an NOI for enrollment under this General Order prior to the change in ownership or control, while the Discharger shall submit a notice of termination.

21. This General Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the Discharger from liability under federal, State, or local laws, nor create a vested right for the owner and operator to continue the regulated activity.

22. Provisions of this General Order are severable. If any provision of this General Order is found invalid, the remainder of the General Order shall not be affected.

23. Each report required by this General Order or MRP Order No. R3-2020-0006 shall be signed by the Discharger or a duly authorized representative as prescribed below, and shall contain the following statement:

    "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

24. All reports shall be signed as follows:

    a. For a public agency - by either a principal executive officer or ranking elected official.

    b. For a partnership or proprietorship - by a general partner or the proprietor, respectively.

    c. For a corporation - by a principal executive officer of at least the level of a vice-president or a duly authorized representative. A "duly authorized representative" means a person who has a written authorization from the Discharger to sign the required reports on behalf of the Discharger

25. The Discharger shall comply with all conditions of this General Order and any additional conditions prescribed by the Central Coast Water Board in amendments thereto. Any noncompliance with this General Order constitutes a violation of the California Water Code and is grounds for: (a) enforcement action [Water Code section, 13263,13267, 13268,13350]; (b) termination of enrollment in this General Order; or (c) denial of an NOI to enroll in a revised General Order.

26. The requirement that the Discharger submit an NOI is made pursuant to California Water Code section 13260 which states in part that a violation of a request made pursuant to section 13260 may subject the Discharger to administrative civil liability of up to $1,000 per day.

27. The Central Coast Water Board will evaluate compliance of individual Dischargers with the terms and conditions of the General Order based on enrollment information, threat of water quality impairment, content of technical reports, results of inspections, and water quality monitoring data. In addition to the determination of noncompliance and water quality impairment, the Central Coast Water Board will enforce the conditions of the General Order consistent with the State Water Board's Enforcement Policy, focusing on the highest priority water quality issues and most severely impaired waters.

28. As provided by the California Water Code section 13350(a), any person may be civilly liable that violates a condition of this General Order and/or discharges waste or causes waste to be discharged into the waters of the State.

ORDERED BY:

I, Matthew T. Keeling, Executive Officer of the California Regional Water Quality Control Board, Central Coast Region, do hereby certify the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Central Coast Region on May 28, 2020.

Matthew T. Keeling

Digitally signed by Matthew T. Keeling
Date: 2020.05.28 17:59:53 -07'00'

Matthew T. Keeling, Executive Officer

Date

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

ATTACHMENT A
MONITORING AND REPORTING PROGRAM ORDER R3-2020-0006

GENERAL WASTE DISCHARGE REQUIRMENTS FOR THE MANAGEMENT AND BENEFICIAL REUSE OF PETROLEUM-IMPACTED SOILS ON ACTIVE OIL LEASES AND FEE PROPERTIES IN THE CENTRAL COAST REGION

This Monitoring and Reporting Program (MRP) is issued pursuant to California Water Code section 13267, which authorizes the California Regional Water Quality Control Board, Central Coast Region (hereafter Central Coast Water Board) to require preparation and submittal of technical and monitoring reports. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer, may subject the discharger to enforcement action pursuant to Section 13268 of the California Water Code. This MRP establishes specific surface and groundwater monitoring, reporting, and electronic data deliverable requirements for owners and/or operators (Discharger) subject to and enrolled under Waste Discharge Requirements General Order for the Management and Beneficial Reuse of Petroleum-Impacted Soils on Active Oilfield Leases and Fee Properties in the Central Coast Region Order No. R3-2020-0006 (General Order). The requirements of this MRP are necessary to monitor Discharger compliance with the provisions of the General Order.

The Discharger shall conduct monitoring, record-keeping, and reporting as specified below.

GENERAL PROVISIONS

Monitoring data collected to meet the requirements of the General Order must be collected and analyzed in a manner that assures the quality of the data.

All submissions, materials, data, monitoring reports, and correspondence shall be converted to a searchable Portable Document Format (PDF) and submitted electronically to the State Water Resources Control Board's internet-accessible database system (GeoTracker database). The exception is the Notice of Intent, which shall be submitted in accordance to Provision F.8 of the General Order. Instructions for Dischargers on how to create a GeoTracker user account, the process of claiming a site, formatting and uploading data, and other technical information can be found under the "ESI Overview" and "Getting Started" sections at http://www.swrcb.ca.gov/water_issues/programs/ust/electronic_submittal.

MONITORING REQUIREMENTS

A. Waste Pile Management Facility Monitoring Requirements

1. Waste Soil Chemical Characterization Sampling Plan

a. Within 90 days of Executive Officer issuing a Notice of Applicability (NOA), the Discharger shall prepare and submit for Executive Officer review and approval a Waste Soil Chemical Characterization Sampling Plan (waste soil sampling plan). At a minimum, the waste soil sampling plan shall include:

i. Project Objective: The waste soil sampling plan shall define the objectives of the sampling program and discuss how the data will be used to demonstrate compliance with the General Order.

ii. Sampling Rationale: The waste soil sampling plan shall define the sampling rationale. This shall include the number of samples collected from an individual waste stream and how the sample(s) location will be selected within the waste soil pile (e.g., random grid, visual contamination, composite sampling, etc.).

iii. Constituents of Concern: The waste soil sampling plan shall identify all the constituents of concern for analysis. At a minimum, this shall include total petroleum hydrocarbons (TPH), TPH-gasoline range organics, TPH-diesel range organics, TPH-motor oil range organics, pH, biotoxicity (fish bioassay), polycyclic aromatic hydrocarbons (PAHs), and California Code of Regulations (CCR) Title 22 metals. Additionally, the waste soil sampling plan shall include the laboratory method that will be used for each analysis and a minimum method detection limit and practical quantitation limit for each constituent.

iv. Laboratory Certification: The waste soil sampling plan shall state that all samples will be analyzed by an ELAP (Environmental Laboratory Accreditation Program) certified laboratory.

v. Sample Collection: The waste soil sampling plan shall include the sample collection method, handling procedures, and holding times.

vi. Sample Control: The waste soil sampling plan shall describe any field and/or requested laboratory quality assurance/quality control (QA/QC) procedures.

vii. Equipment Decontamination: The waste soil sampling plan shall describe all equipment decontamination procedures.

b. Chemical characterization data shall be collected in accordance with an approved waste soil sampling plan. Any deviation from the approved sampling plan will require Executive Officer approval.

2. Facility Inspections

a. **Waste Pile Management Facilities**

Concrete Lined Facilities

Annually:

For concrete lined waste pile management facilities, the Discharger shall conduct a visual inspection of the entire liner to ensure integrity. This visual inspection may be done in phases if stored waste soils at the facility prohibit the inspection from being completed in one day. Visual inspections shall document, including with photographs, all areas of the liner that show evidence of cracks, uneven grading or other defects that may limit the liner's ability to maintain complete containment.

Earthen Lined Facilities

Two separate inspections - One prior to, and one following the rainy season (April 1st through September 30th):

For waste pile management facilities with earthen liners or waste soil liners, the Discharger shall conduct visual inspections of the entire liner to ensure integrity prior to and following the rainy season. These visual inspections may be done in phases if stored waste soils at the facility prohibit the inspection from being completed in one day. Visual inspections shall document, including with photographs, all areas of the liner that show evidence of erosion, need for grading or re-grading to promote stormwater management, evidence of ponding, damage caused by heavy equipment, or any other defect that may limit the liners ability to maintain complete containment.

Monthly during the rainy season (October 1st through March 31st):

All earthen waste pile management facilities shall be inspected monthly during the rainy season for evidence of ponded water at any location within the waste pile management facility boundary and/or any erosion and/or sedimentation within the waste pile management facility. All instances of ponding, erosion, and/or sedimentation shall be documented and photographed.

b. **Stormwater Management Features**

All Waste Pile Management Facilities

Two separate inspections - One prior to, and one following the rainy season (April 1st through September 30th):

The Discharger shall visually inspect and document, including photographs, the condition of all berms, curbs, drainage systems, culverts, sump pumps, and any other component critical to stormwater management at the waste pile management facility.

Monthly during the rainy season (October 1st through March 31st):

The Discharger shall visually inspect the performance of all stormwater management features and document any evidence of liquid leaving or entering the waste pile management facility. If observed, the Discharger shall estimate the size of the affected area, the volume and duration, as well as document the location of the affected area on a map. The Discharger shall also visually inspect for, and document any evidence of, erosion and/or sedimentation. The Discharger shall inspect the waste pile management facilities' boundary to ensure the integrity of all perimeter stormwater management features.

c. Within 48 hours of conducting a visual inspection, the Discharger shall notify the Central Coast Water Board when liner defects that require repair have been observed. The Executive Officer may require the Discharger to submit a repair workplan for review and approval if the defect is significant, as determined by the Executive Officer.

d. Any stormwater containment and/or diversion features inspected during the non-rainy season inspection that require repair shall be completed within 30 days of the visual inspection, or by the start of the rainy season on October 1st. Any stormwater containment and/or diversion features that require repair during the rainy season shall be addressed immediately.

e. If at any time the waste pile management facility is observed to not maintain complete containment, the Discharger shall determine and identify the failed management practice and/or source of discharge. Discharge to a surface water or groundwater of the State is prohibited by the General Order. The Discharger shall notify Central Coast Water Board staff of any management practice failure that results in a discharge to waters of the State within 24 hours of the discharge.

3. Record Keeping Requirements

a. The Discharger shall monitor and document the importation and exportation of all waste soils managed at the waste pile management facility. It is the

objective of this MRP to track all waste soils from their origin to their ultimate destination in either a beneficial reuse project or off-site disposal. To meet this objective, the following information shall be recorded for all imported waste soils:

i. The specific geographic location where waste soils were generated. This shall include the lease name, GPS coordinates, and when appropriate, an American Petroleum Institute (API) well number or a tank/pond/equipment operator identification name and/or number.

ii. The specific source of petroleum contamination (e.g., pipeline leak, accidental spill, tank bottom cleanout, pond cleanouts, other equipment maintenance, etc.) or spent sandblasting aggregate.

iii. The date(s) each load of waste soils are imported to the waste pile management facility.

iv. The estimated volume of waste soils for that load.

v. The documentation for the disposal of all waste soils not used in a beneficial reuse project and disposed of at an appropriately designated disposal facility. This shall include both the volume of waste soils and the name of the disposal facility.

b. The Discharger shall maintain a logbook that, at a minimum, records the information specified in Record Keeping Requirements section 3.a above. The logbook shall be made available for inspection to Central Coast Water Board and all other federal, state, and local agencies with regulatory authority over oilfield activities. A summary of this information shall also be submitted in the annual report as required by Reporting Requirements C.2 of this MRP.

c. The Discharger shall maintain a copy of the analytical laboratory data, all associated laboratory quality assurance/quality control documentation, and all chain of custody documentation. The Discharger shall also maintain the results of analytical laboratory data in a database file or other delineated text file such as Microsoft Excel files (.xlsx, .xls, .dbf, .ods, etc.) or a delineated text (.txt, .csv, etc.).

d. The Discharger shall keep all site inspection records, including photographs documenting the site conditions and any documentation of liner repairs and/or stormwater management feature/equipment repairs.

e. The Discharger shall record all management practices inspected in accordance section A.2. of this MRP and indicate in the records if the management practice was effective.

B. Beneficial Reuse Project Monitoring Requirements

This section of the MRP only applies to Dischargers proposing a beneficial reuse project(s). If the Discharger chooses to dispose of all waste soils off-site at an appropriately designated disposal facility, the following MRP requirements do not apply.

The Site-Wide Beneficial Reuse Project Plan shall be submitted **within 90 Days** of the Discharger receiving its NOA. The Site-Wide Beneficial Reuse Project Plan shall be updated annually and submitted for Executive Officer Approval by April 1st of each year.

1. Site-Wide Beneficial Reuse Project Plan

a. The Discharger shall submit a Site-Wide Beneficial Reuse Project Plan (reuse plan) for Executive Officer review and approval. At a minimum, the reuse plan must include:

i. Project Summary: The reuse plan shall include a project summary that describes the location, type, and existing condition of past beneficial reuse projects, defines the types of beneficial reuse projects that will be constructed under the General Order, and specifies a strategy to limit the time waste soils are stored within the waste pile management facility.

ii. Historical Waste Soils: If applicable, the reuse plan shall include a plan to beneficially reuse, or dispose of, all existing waste soil currently stored at waste pile management facilities no later than 1 year after the adoption of the General Order.

iii. Annual Planned Projects: The reuse plan shall include project information for all proposed beneficial reuse projects the Discharger will construct within that calendar year. This project information shall be updated annually and include at a minimum the following:

a. The type of beneficial reuse project (e.g., oilfield road, berm, curb, etc.) and any plan drawings or completion reports.

b. The specific management practices that will be used to ensure the integrity of the beneficial reuse project (e.g., erosion controls, compaction standards, road crowning, etc.).

c. The location of the proposed beneficial reuse project. This shall include a map and drawing of the propose beneficial reuse project.

d. The volume of waste soils needed to complete the beneficial reuse project.

e. The material standards and what, if any, treatment of the waste soils is necessary to meet these standards.

iv. Completed Beneficial Reuse Projects: Starting on the first annual update and continuing each following year, the reuse plan shall document the completion of all beneficial reuse projects. This documentation shall include at a minimum:

a. A map showing the location of the beneficial reuse project.

b. Pictures documenting the completion of the beneficial reuse project.

c. The volume of waste soils used in the completed beneficial reuse project.

d. A list of all the management practices and standards used in the design and construction of the beneficial reuse project. If these management practices and/or the design differs from what was originally proposed and approved, the Discharger shall provide a narrative explaining why the changes were made and how the revised project and/or differing management practices are protective of water quality.

v. Beneficial Reuse Project Inspection Results: Starting on the first annual update and continuing each following year, the reuse plan shall document the results of this MRPs beneficial reuse inspection requirements described in section B.2 of this MRP.

2. Project Inspections

a. The Discharger shall conduct the inspections specified below and include a summary of the inspection findings in the annual reuse plan update.

b. If at any time a beneficial reuse project is observed discharging waste soils, the Discharger shall identify the failed management practice and notify the Central Coast Water Board within 24 hours. Discharge to a surface water or groundwater of the State is prohibited by the General Order.

c. <u>All beneficial reuse projects – Monthly during the rainy season (October 1st through March 31st):</u>

All beneficial reuse projects shall be visually inspected monthly during the rainy season for evidence of ponded water and erosion and/or sedimentation. All instances of ponding water and erosion, and/or sedimentation shall be documented and photographed.

d. Roads constructed using waste soils – Two separate inspections - One prior to, and one following the rainy season (April 1st through September 30th):

The Discharger shall visually inspect all beneficial reuse projects roads and document, including photographs, the condition of these projects. The inspection shall identify any areas of erosion, crumbling, evidence of ponded water, buckling, deterioration, damage from heavy equipment or any other defect that could mobilize waste soils. The Discharger shall also inspect all stormwater management features installed to maintain the roads integrity (e.g., culverts, curbs, etc.).

e. Stormwater management features constructed using waste soils – Two separate inspections - One prior to, and one following the rainy season (April 1st through September 30th):

The Discharger shall visually inspect all berms or curbs constructed with waste soils during the rainy season and document, including photographs, any instances of erosion and/or sedimentation.

f. All other beneficial reuse projects[1]:

The Discharger shall propose an inspection schedule and list of inspection criteria, for review and approval by the executive Officer, for all other beneficial reuse projects.

3. Record-Keeping Requirements:

a. The Discharger shall keep all beneficial reuse project inspection records, including photographs documenting the site conditions.

b. The Discharger shall keep documentation of all corrective action measures, repairs, or maintenance on beneficial reuse projects.

REPORTING REQUIREMENTS

C. Waste Pile Management Facility Annual Data Submittal and Inspection Report

The waste pile management facility annual data submittal and inspection report (Annual Report) shall be submitted to the Central Coast Water Board by April 1st each year for the prior calendar year. The Discharger must submit this report in a searchable, electronic format (i.e., portable document format [PDF] and electronic deliverable format [EDF]) via the State Water Board's internet based GeoTracker

[1] This section of the beneficial reuse project inspection requirements does not include waste pile management facilities constructed using waste soils. Inspections for waste pile management facilities are described in Monitoring Requirements A.2 of this MRP.

system at http://geotracker.waterboards.ca.gov/ as required by this General Order. The report must include:

1. Identification of the beginning and end dates of the annual reporting period.

2. A summary of all imported/exported waste soils managed at the waste pile management facility. The summary must include the following:

   a. The specific geographic location where waste soils were generated,

   b. The specific source of petroleum contamination,

   c. An estimate of total volume of waste soils for each waste stream,

   d. The estimated volume of waste soils used in beneficial reuse projects, and

   e. The estimated volume of waste soils exported off-site for disposal.

3. The total volume of produced water imported for use within the waste pile management facility (i.e., dust control, construction, and waste soil treatment activities).

4. Tabulated analytical data for the characterization of all waste soils.

5. Copies of waste soil laboratory analyses, including field sampling sheets, chain of custody forms, and laboratory quality assurance/quality control (QA/QC) results.

6. A summary of the required inspections for the waste pile management facility working surface and stormwater management features. This summary shall include photographic evidence to support the written summary and identify all violations and/or structure integrity issues that were identified during the inspections and the steps taken to resolve them.

7. Results from any other monitoring related to the waste pile management facility that occurred within the annual monitoring period (i.e., stormwater monitoring, groundwater monitoring, soil monitoring other than waste soil chemical characterization, etc.).

D. Beneficial Reuse Projects

As described in Monitoring Requirements section B of this MRP, the Discharger shall submit a site-wide beneficial reuse project plan within 90 days of receiving a NOA for coverage under this General Order and an updated site-wide beneficial reuse project plan that describes the status and inspection history of all completed beneficial reuse projects by April 1st of each year.

E. General Reporting Requirements

The Business and Professions Code sections 6735, 7835, and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction of licensed professionals. Any plan or report submitted in compliance with the requirements of this General Order, which requires technical interpretation, or proposes either a design, or a design change that might affect the waste pile management facilities containment features or monitoring systems must be prepared by, or under the direction of, appropriately licensed professionals (e.g., registered civil engineer, professional geologist, or other registered certified specialty geologist) by the State of California. As applicable, the licensee must sign and provide his or her stamp on the submitted plan or report.

ORDERED BY:

Matthew T. Keeling

Digitally signed by Matthew T. Keeling
Date: 2020.05.28 18:00:33 -07'00'

Matthew T. Keeling, Executive Officer

Date

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

ATTACHMENT B
ADDITIONAL FINDINGS FOR ORDER R3-2020-0006

GENERAL WASTE DISCHARGE REQUIREMENTS FOR THE MANAGEMENT AND BENEFICIAL REUSE OF PETROLEUM-IMPACTED SOILS ON ACTIVE OIL LEASES AND FEE PROPERTIES IN THE CENTRAL COAST REGION

Additional findings of the California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board or Board) presented below describe the legal requirements and technical rationale that serve as the basis for the requirements of General Waste Discharge Requirements Order R3-2020-0006 (General Order) and Monitoring and Reporting Program Order No. R3-2020-0006 (MRP).

RATIONALE FOR ISSUING THIS GENERAL ORDER

1. Some wastes generated during oil production are exempt from regulation as hazardous wastes by the United States Environmental Protection Agency (USEPA) and California's Department of Toxic Substances Control (DTSC). DTSC Management Memo #EO-94-015-MM adopts the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) petroleum exclusion and grants variance from hazardous waste management requirements for petroleum, crude oil, and fractions of crude oil. The Central Coast Water Board has jurisdiction to order cleanup at sites where contamination, including unrefined and refined petroleum, threatens water quality.

2. Under the Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code and hereafter referred to as the Water Code), the Central Coast Water Board has the authority to regulate waste discharges that could affect the quality of the waters of the State. Under Water Code section 13050(e), "waters of the State" include any surface or groundwater within the boundaries of the State.

3. Water Code section 13260 requires that any person discharging waste, or proposing to discharge waste, within the Central Coast Region, that could affect the quality of waters of the State, shall file a report of waste discharge with the Central Coast Water Board.

4. Waste Discharge Requirements are one method available to the Central Coast Water Board to ensure that a discharge of waste does not threaten beneficial uses or otherwise impair water quality. Water Code section 13263 requires that waste discharge requirements implement the relevant water quality control plan, including any applicable water quality objectives. Pursuant to Water Code section 13263(i),

the Central Coast Water Board may prescribe general waste discharge requirements for a category of discharges if all the following criteria apply:

a. The discharges are produced by the same or similar operations;

b. The discharges involve the same or similar types of waste;

c. The discharges require the same or similar treatment standards; and

d. The discharges are more appropriately regulated under general requirements than individual requirements.

5. Waste pile management facilities and beneficial reuse projects at active oilfields meet all the categories listed in California Water Code section 13263(i).

6. California Code of Regulations, Title 27, sections 20200 through 20230 establish a waste classification system. Wastes covered under California Code of Regulations, title 27 are classified as either inert, nonhazardous solid, or designated. Inert wastes pose minimal risk to water quality, nonhazardous solid wastes present a greater risk than inert wastes, and designated wastes pose the greatest risk to water quality. Waste soil as defined in this General Order meet the definition of nonhazardous solid waste under California Code of Regulations, title 27, section 20220, subdivision (a).

7. California Code of Regulations, title 27, section 20200, subdivision (a)(1) allows a finding to be made that, "…a particular waste constituent or combination of constituents presents a lower risk of water quality degradation than indicated by classification according to this article." Therefore, to the extent that waste soils could be characterized as designated waste, such material shall be regulated as a nonhazardous solid waste pursuant to California Code of Regulations, title 27, section 20200, subdivision (a)(1) because the material presents a lower risk to water quality than typical designated wastes when managed as required by this General Order.

8. The California Code of Regulations, Title 27 regulations that apply to nonhazardous solid waste only apply to such waste that is disposed of in a landfill. The beneficial reuse of non-hazardous waste soils on active oilfield leases and fee properties will divert reclaimable waste soils from landfills which is one of the goals of this General Order. Therefore, for waste pile management facilities and beneficial reuse projects eligible for coverage under this General Order, Title 27 regulations shall not apply so long as the Discharger continues to meet the requirements of this General Order.

9. In September 2005, the Central Coast Water Board adopted General Conditional Waiver of Waste Discharge Requirements for the Reuse of Non-Hazardous Crude Oil Impacted Soil and Non-Hazardous Spent Sand Blasting Aggregate on Active Oil Leases and Fee Properties in the Central Coast Region (Orders R3-2005-0005) and General Conditional Waiver of Waste Discharge Requirements for the Management of Petroleum-Impacted Soils at Authorized Waste Pile Management

Facilities on Active Oil Leases and Fee Properties in the Central Coast Region (Orders R3-2005-0006), which waived waste discharge requirements for these operations where the Discharger complied with waiver programs.

10. In September 2010, the Central Coast Water Board renewed the conditional waiver programs by adopting Orders R3-2010-0036 and R3-2010-0037. As required by section 13269 of the California Water Code, the conditional waivers expired in September 2015. In accordance with the delegation of authority granted in section 13223 of the California Water Code, the Central Coast Water Board's Executive Officer issued Order R3-2015-0031 to extend the termination date of the conditional waivers by two years. This General Order will provide coverage for discharges that were regulated under the conditional waiver programs, while also making the containment and monitoring requirements more protective of water quality, consistent with other Central Coast Water Board programs.

GENERAL FINDINGS

11. **Human Right to Water** - In Resolution No. R3-2017-0004, the Central Coast Water Board resolved to prioritize the human right to water in all activities that could affect existing or potential sources of drinking water, including permitting. This Order is consistent with Resolution No. R3-2017-0004 by requiring containment at waste pile management facilities and ensuring best practicable treatment or control (BPTC) of the discharge is implemented during beneficial reuse projects to protect groundwater and surface water that serve as sources of drinking water in the Central Coast Region.

12. **Disadvantaged Community Status -** Based on 2016 census data[1], 61 disadvantaged community (DAC) census block groups are within one mile of an active oilfield lease or fee property. If impacts to surface water or groundwater quality results from the discharges regulated by this General Order, Central Coast Water Board staff will help facilitate outreach and education to inform affected parties and connect them with available resources, especially disadvantaged communities.

13. **Response to Climate Change -** Climate change refers to observed changes in regional weather patterns such as temperature, precipitation, and storm frequency and size. At the local scale, within urbanized areas, climate change may directly impact groundwater and surface water supply; drainage, flooding, and erosion patterns; and ecosystems and habitat. The State Water Board's Resolution No. 2017-0012, "Comprehensive Response to Climate Change," requires a proactive response to climate change in all California Water Board actions, with the intent to embed climate change consideration into all programs and activities. Aligning with Resolution No. 2017-0012, this General Order regulates the discharge of wastes related to beneficial reuse of waste soils on-site at active oil leases. Supporting the

[1] Based on 2016 census data, a DAC census block group is defined as a median household income between $38,270 and $51,026. An interactive map displaying DAC data can be viewed at the Department of Water Resources DAC mapping tool website (https://gis.water.ca.gov/app/dacs/).

beneficial reuse of waste soils on-site will reduce carbon emissions by decreasing the volume of material and the fuel required to transport material off-site for disposal.

14. This General Order does not authorize violation of any federal, state, or local law or regulation.

15. In accordance with Water Code section 13263(g), the discharge of waste into water of the state is a privilege, not a right, and this General Order does not create a vested right to continue discharge of a waste. Failure to prevent conditions that create, or threaten to create, pollution or nuisance will be reason to modify, revoke, or enforce this General Order.

16. Any person who discharges waste or causes or permits waste, oil, or any residuary product of petroleum to be discharged to the waters of the state in violation of this Order may be subject to enforcement action pursuant to Section 13350 of the California Water Code.

17. This General Order is not an NPDES Permit issued pursuant the Federal Clean Water Act. While section 402(l)(2) of the Federal Clean Water Act exempts oil and gas exploration and production from NPDES permit requirements except under certain circumstances, coverage under this General Order does not exempt a facility from the Federal Clean Water Act.

18. Dischargers seeking coverage under this General Order are required to file a Notice of Intent (NOI) with the Central Coast Water Board as described in Attachment C.

SPECIFIC FINDINGS

19. This General Order authorizes beneficial reuse projects on active oilfield leases and fee properties, consistent with the provisions of this General Order. Waste soils that do not meet the requirements defined in this General Order for beneficial reuse shall be disposed of at an appropriately permitted land disposal site.

20. Chemical characterization data collected under Order No. R3-2010-0036 established that waste soils have the potential to adversely impact surface water and groundwater quality if not appropriately managed. Constituents that exceeded their respective environmental screening level[2] for leaching based on protecting drinking water and non-drinking water standards or gross contamination include total petroleum hydrocarbon (TPH) gasoline, TPH diesel, TPH heavy oil, total xylenes, phenanthrene, naphthalene, 2-methylnaphthalene, methylene chloride, fluorene, ethylbenzene, and chrysene.

[2]Environmental screening levels (ESLs) provide conservative screening levels for common chemicals found at sites with contaminated soils and groundwater and are intended to help evaluate potential environmental concerns at contaminated sites. https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.html

21. This General Order includes specific requirements for fully contained waste pile management facilities that pose a low threat to water quality and do not require groundwater quality monitoring to demonstrate compliance with the General Order's water quality objectives. Fully contained waste pile management facilities are defined as:

    a. A waste pile management facility constructed with an impermeable concrete liner, or

    b. An Executive Officer approved engineered alternative liner that has been demonstrated to fully contain waste soils from underlying groundwater and has been certified by California-licensed Professional Engineer or Professional Geologist.

MONITORING AND REPORTING PROGRAM

22. Water Code section 13267(b)(1) provides:

    In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports. When requested by the person furnishing a report, the portions of a report that might disclose trade secrets or secret processes may not be made available for inspection by the public but shall be made available to governmental agencies for use in making studies. However, these portions of a report shall be available for use by the state or any state agency in judicial review or enforcement proceedings involving the person furnishing the report.

23. Technical reports are necessary to evaluate the Discharger's compliance with the terms and conditions of this General Order and to ensure that applicable water quality objectives are in fact being met. Consistent with Water Code section 13267, this General Order requires the implementation of a monitoring and reporting program (MRP) that is designed to determine the effects of the Discharger's activity on water quality, to verify the effectiveness of management practices designed to comply with applicable water quality objectives, to verify the adequacy and effectiveness of the General Order's conditions, and to evaluate Discharger compliance with the terms and conditions of the General Order. The burden of these reports bears a reasonable relationship to the need for the report and the

benefits to be obtained from the reports. Cost estimates for compliance with this General Order, including the preparation of these reports, are included in Finding 36 below. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer, may subject the Discharger to enforcement action pursuant to Section 13268 of the California Water Code. The Water Board will base all enforcement actions on the date of Order adoption

CALIFORNIA ENVIRONMENTAL QUALITY ACT

24. The Central Coast Water Board is the lead agency with respect to the issuance of this General Order under applicable provisions of the California Environmental Quality Act (CEQA) (Public Resources Code, §21000 et seq.). The action to adopt this General Order is intended to maintain or improve water quality by prescribing operational conditions and mandating the use of effective management practices to ensure impacts to water quality and the environment do not occur.

25. In September 2005, in accordance with California Code of Regulations (CCR), title 14, section 15063, the Central Coast Water Board conducted an Initial Study for the proposed adoption of No. R3-2005-005 General Conditional Waiver of Waste Discharge Requirements for the Reuse of Non-Hazardous Crude Oil Impacted Soil and Spent Sandblasting Aggregate on Active Oil Leases and Fee Properties in the Central Coast Region. By Resolution R3-2005-0089, the Central Coast Water Board adopted a negative declaration on September 9, 2005, concurrent with the adoption of Order No. R3-2005-005. No significant impacts related to water quality were identified in the Initial Study. A Notice of Determination was filed with the State Clearinghouse on September 9, 2005. This General Order relies on the environmental impact analysis contained in the 2005 Initial Study and Negative Declaration to satisfy the requirements of CEQA.

26. Section 15162 of the CEQA guidelines specifies that when a negative declaration is adopted for a project, no subsequent environmental impact report (EIR) shall be prepared for that project unless the lead agency determines that substantial changes are proposed for the project and that these changes involve new or more severe significant environmental impacts not addressed in the original negative declaration. This General Order does not propose significant changes to the project and therefore does not include new or more severe environmental impacts.

27. Pursuant to CEQA Guidelines, California Code of Regulations, Title 14, section 15164, the Central Coast Water Board prepared an Addendum to the Negative Declaration on May 28, 2020. The Addendum evaluates the proposed changes to the project and whether they create a condition described in section 15162(a). The Addendum determines that no new significant impacts will result, and no substantial increase in severity of impacts will result from those previously identified in the Initial Study and Negative Declaration. Therefore, the conditions in section 15162(a) do not occur, and a subsequent negative declaration or environmental impact report is

not necessary. In accordance with CCR title 14, section 15164(d), the Central Coast Water Board has considered the Addendum with the 2005 Negative Declaration.

28. If it is determined that a Discharger filling for coverage under this General Order could create impacts not identified in the 2005 Initial Study and Negative Declaration, additional CEQA analysis may be required prior to coverage under this General Order.

BASIN PLAN AND BENEFICIAL USES

29. The Water Quality Control Plan for the Central Coast Basin (Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board (State Water Board).

30. Pursuant to Chapter II of the Basin Plan, the beneficial uses of inland surface waters of the Central Coast Region may include the beneficial use listed below. Where surface water bodies are not specifically listed, the Basin Plan designates beneficial uses based on the waters to which they are tributary.

- Municipal and Domestic Supply (MUN)
- Agricultural Supply (AGR)
- Industrial Process Supply (PRO)
- Industrial Service Supply (IND)
- Groundwater Recharge (GWR)
- Fresh Water Replenishment
- Navigation (NAV)
- Hydropower Generation (POW)
- Water Contact Recreation (REC-1)
- Non-contact Water Recreation (REC-2)
- Commercial and Sport Fishing (COMM)
- Aquaculture (AQUA)
- Warm Fresh Water Habitat (WARM)
- Cold Fresh Water Habitat (COLD)
- Inland Saline Water Habitat (SAL)
- Estuarine Habitat (EST)
- Wildlife Habitat (WILD)
- Preservation of Biological Habitats of Special Significance (BIOL)
- Rare, Threatened, and/or Endangered Species (RARE)
- Migration of Aquatic Organisms (MIGR)
- Spawning, Reproduction, and/or Early Development (SPWN)
- Shellfish Harvesting (SHELL)

31. The Basin Plan designates that groundwater throughout the Central Coast Basin, except for that found in the Carrizo Plain groundwater basin, is suitable for municipal

and domestic supply, agricultural supply, industrial process supply and industrial service supply.

32. Pursuant to Water Code section 13263(a), this General Order must implement the Basin Plan including consideration of the beneficial uses of water, the water quality objectives reasonably required for protection of those beneficial uses, other waste discharges, and the need to prevent nuisance conditions. Water quality objectives are the limits or levels of water quality constituents or characteristics that are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area (Water Code section 13050(h)). Water quality objectives apply to all waters within a surface water or groundwater resource for which beneficial uses have been designated.

33. This General Order requires the containment of all wastes at waste pile management facilities from Waters of the State and therefore implements the water quality objectives defined in the Basin Plan.

34. This General Order requires that beneficial reuse projects implement management practices protective of surface waters and groundwater and therefore implements the water quality objectives defined in the Basin Plan.

WATER CODE SECTION 13241

35. Water Code section 13263 requires that the Central Coast Water Board consider the following factors, found in section 13241, when adopting waste discharge requirements:

    a. Past, present, and probable future beneficial uses of water;

    b. Environmental characteristics of the hydrographic unit under consideration; including the quality of water available thereto;

    c. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;

    d. Economic considerations;

    e. The need for developing housing within the region(s); and

    f. The need to develop and use recycled water.

36. The issuance of this General Order is consistent with the goal to provide water resources protection, while considering economic and environmental impacts stated in the Basin Plan and Water Code section 13263.

    Based on currently available information on the operational practices at oilfields, staff has estimated the cost of compliance with this General Order (e.g., sampling and analysis costs, record keeping and reporting, inspections, etc.). These

estimates are summarized below. The costs do not include the construction of a new waste pile management facility, nor upgrades to an existing waste pile management facility necessary to meet the containment requirements of this General Order. First year cost estimates for facilities with groundwater monitoring does include an estimate for the installation of a groundwater monitoring well network.

a. Facilities with groundwater monitoring;

   i. Estimated first year costs - $25,000 to $100,000

   ii. Estimated annual costs - $10,000 to $16,000

b. Facilities without groundwater monitoring;

   i. Estimated first year costs - $15,000 to $30,000

   ii. Estimated annual costs - $8,000 to $13,000

37. Waste pile management facilities and beneficial reuse projects are appropriately regulated by a General Order because they: (a) involve similar types of operations, where waste soils are stored and beneficially reused within the oilfield boundary; (b) the discharges from these operations, which consists only of crude oil contaminated soils and used sand blasting aggregate, are similar; (c) the operations are subject to regulations that impose the same or similar treatment standards; and (d) given the number of operations and their similarities the operations are more appropriately regulated under a General Order.

STATE ANTI-DEGRADATION POLICY (RESOLUTION 68-16)

38. State Water Board Resolution 68-16, Statement of Policy with Respect to Maintaining High Quality of Water of California (hereafter referred to as the Anti-degradation Policy) requires that disposal of waste into waters of the state be regulated to achieve the highest water quality consistent with the maximum benefit to the people of the state. The quality of some waters of the state is higher than that established by adopted policies, and that higher quality water shall be maintained to the maximum extent possible consistent with the Anti-degradation Policy. The Anti-degradation Policy requires the following:

a. Maintenance of existing high-quality waters of the state unless limited degradation is consistent with maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial use of the water, and will not result in water quality less than that prescribed in state policies.

b. Any activity that produces or may produce a waste and discharges or proposes to discharge to existing high quality waters will be required to meet Waste Discharge Requirements that will result in best practicable treatment or control (BPTC) of the discharge necessary to assure pollution or nuisance will not occur,

and the highest water quality consistent with maximum benefit to the people of the state will be maintained.

39. Consistent with the Anti-degradation Policy, this General Order establishes specific requirements and standards that will result in the implementation of BPTC of the discharge necessary to ensure that pollution or nuisance will not occur and that the highest water quality consistent with the maximum benefit to the people of the state will be maintained. Degradation of high-quality waters of the state due to discharges of waste from waste pile management facilities is not expected because this General Order requires BPTC measures, including the complete containment of all waste soils managed within a waste pile management facility, and therefore prohibits discharges to surface waters or groundwater. The beneficial reuse of waste soils on active oilfield leases authorized by this General Order may result in limited degradation of existing high-quality waters of the state. This General Order requires beneficial reuse projects to implement BPTC measures protective of surface waters and groundwater. Therefore, compliance with the requirements of this General Order will protect and maintain existing and potential beneficial uses of both groundwater and surface waters in the Central Coast Region and will not result in water quality less than that prescribed in state policies.

40. Consistent with the Anti-degradation Policy, the General Order requires BPTC measures to restrict the discharge of wastes from waste pile management facilities to prevent pollution and nuisance conditions and limit any degradation of receiving waters. To ensure containment of waste soils within a waste pile management facility is achieved, this General Order requires one of the following BPTC measures:

    a. Impermeable Concrete Working Surfaces: The waste pile management facility is constructed atop an impermeable working surface such as a concrete liner and is engineered to contain all waste soils and any fluids (precipitation or liquid factions of the waste soils) within the facility and preclude discharge to surface water and/or groundwater.

    b. Engineered Alternative Liner: The waste pile management facility is constructed atop an engineered alternative liner that provides complete containment of waste soils and any fluids (precipitation or liquid factions of the waste soils) within the facility and preclude discharge to surface water and/or groundwater. Dischargers proposing an engineered alternative liner must submit a design plan prepared by a California-licensed Professional Engineer or Professional Geologist and receive Executive Office approval prior to initiating construction.

    c. Engineering Evaluation of Existing Liner: Dischargers operating waste pile management facilities with liners that do not meet the construction criteria described in this General Order may conduct an engineering evaluation to demonstrate that the existing liner provides complete containment of wastes. This engineering evaluation must be certified by California-licensed Professional

Engineer or Professional Geologist and be submitted for review and approval by the Executive Officer.

d. Groundwater Monitoring Alternative: If a Discharger is unable to demonstrate containment through an engineering evaluation, or chooses not to perform and engineering evaluation, this General Order requires groundwater monitoring to demonstrate containment.

41. Consistent with the Anti-degradation Policy, the General Order requires Dischargers to implement BPTC measures to restrict the discharge of wastes from beneficial reuse projects to prevent pollution and nuisance conditions and limit the degradation of receiving waters. The Central Coast Water Board considers the following general management practices to be BPTC for specified beneficial reuse projects:

a. Oilfield Roads: Oilfield roads constructed with waste soils must be designed to ensure their structural integrity and preclude erosion. Management practices that assist in meeting these performance goals include, but are not limited to, crowning, elevating roads, adequate supporting materials, sufficient and appropriate aggregate and binding material, flow divertors such as berms or curbing, culverts, and rip rap. As required by this General Order, Dischargers must prepare a Site-Wide Beneficial Reuse Project Plan that specifies the design of all beneficial reuse project roads and identifies the management practices that will be implemented to ensure structural integrity. In addition, this General Order requires Dischargers inspect all oilfield roads constructed using waste soils to ensure that the implemented management practices are effective.

b. Engineered Berms: Engineered berms constructed with waste soils must be designed to ensure their structural integrity under the stresses of their intended use (e.g., stormwater management, flow diversion, secondary containment, etc.). Management practices that assist in meeting these performance goals include adequate height and slope ratios, compaction, and sufficient and appropriate aggregate and binding material. As required by this General Order, specific management practices employed by the Discharger will be proposed in the Site-Wide Beneficial Reuse Project Plan.

c. Waste Pile Management Facilities: The previous General Waiver program allowed Dischargers to construct waste pile management facilities out of beneficial reuse materials but did not require sufficient information to demonstrate that the facilities would achieve complete containment as required by the General Waiver. While this General Order does not prohibit the use of waste soils to construct waste pile management facilities, these facilities must be constructed in accordance with the Waste Pile Management Facility Specifications of this General Order to ensure that pollution or nuisance will not occur.

42. Maximum Benefit to the People of the State: The Central Coast Water Board has the regulatory responsibility to protect water quality and prioritize the protection of

beneficial uses and public health. The Central Coast Water Board also finds that the public has an interest in the viability of the oil industry as a source of crude oil and an important economic driver in the State. The Anti-degradation Policy does not allow degradation that causes a pollution or nuisance, so discharges must not cause exceedances of water quality objectives, including maximum contaminant levels that are incorporated by reference as water quality objectives. Consistent with the Anti-degradation Policy, this General Order establishes requirements and standards that will result in the implementation of BPTC measures necessary to assure that pollution or nuisance will not occur. The Central Coast Water Board finds that any resulting degradation will be limited by this General Order consistent with the maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of the water, and will not result in water quality less than that prescribed in state policies.

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

ATTACHMENT C
NOTICE OF INTENT FOR ORDER R3-2020-0006

GENERAL WASTE DISCHARGE REQUIREMENTS FORTHE MANAGEMENT AND BENEFICIAL REUSE OF PETROLEUM-IMPACTED SOILS ON ACTIVE OIL LEASES AND FEE PROPERTIES IN THE CENTRAL COAST REGION

INTRODUCTION

Dischargers seeking coverage under General Order R3-2020-0006 (General Order) are required to file a Notice of Intent (NOI) with the Central Coast Regional Water Quality Control Board (Central Coast Water Board). Dischargers previously enrolled under General Conditional Waiver of Waste Discharge Requirements Order No. R3-2010-0036 for the Management of Petroleum-Impacted Soils at Authorized Waste Pile Management Facilities on Active Oil Leases and Fee Properties in the Central Coast Region, Conditional Waiver of Waste Discharge Requirements Order No. R3-2010-0037 for the Reuse of Non-Hazardous Crude Oil Impacted Soil and Non-Hazardous Spent Sand Blasting Aggregate on Active Oil Leases and Fee Properties in the Central Coast Region, and Executive Officer Order No. R3-2015-0031 Extending the Termination Date of Order No. R3-2010-0036 and are seeking continued coverage under this General Order shall submit a NOI within 90 days of the adoption date of the General Order. The NOI consists of the following:

a) A completed Form 200, which is available at: http://www.waterboards.ca.gov/publications_forms/forms/docs/form200.pdf
b) A one-time application fee corresponding to a threat to water quality and complexity rating of 3C in the fee schedule found in the California Code of Regulations Title 23, Division 3, Chapter 9, Section 2200 (fee schedule).
c) A technical report meeting the information described below.

The technical report required as part of the NOI to comply with the terms of the General Order must be organized such that each item listed below is addressed in the same format, including the numbering scheme. The entire General Order should be thoroughly reviewed for its requirements prior to preparation of this technical report. The minimum information needed to provide a complete review of your application by the Central Coast Water Board is listed below. This list may not reference all information needed for every waste pile management facility and beneficial reuse project.

The Business and Professions Code sections 6735, 7835, and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction of licensed professionals. Any plan or report submitted in compliance with the requirements of this General Order, which requires technical interpretation, or proposes either a design, or a design change that might affect the waste pile management facilities' containment features must be prepared by, or under the direction of, appropriately licensed professionals (e.g., registered civil engineer, professional geologist, or other registered certified specialty geologist) by the State of California. In addition, the licensee must sign and provide his or her stamp on the submitted plan or report.

If the information in the NOI demonstrates that coverage under this General Order is appropriate, the Central Coast Water Board's Executive Officer (Executive Officer) will authorize coverage by issuing a Notice of Applicability (NOA). Coverage under this General Order will commence upon issuance of the NOA. The Executive Officer may determine that the discharge should be regulated by individual waste discharge requirements, a different general order, an enforcement order, or National Pollutant Elimination System (NPDES) permit in the case of discharges to waters of the United States. In these cases, the Executive Officer will notify the Discharger in writing of such a determination.

GENERAL INFORMATION

A. Contact Information:

1. Oilfield Operators name contact information (mailing address, email address, and telephone number), and type of ownership.

2. Waste pile management facility operators name and contact information, if different from owner.

3. Primary contact person/staffs name and contact information.

4. Landowner and contact information.

5. Written consent from the landowner(s) where waste pile management facilities and/or beneficial reuse projects are, or will be, constructed.

B. Waste Pile Management Facility Information:

1. Waste pile management facility name, street address and/or latitude and longitude (approximate center of facility), oilfield and lease name or fee property, and assessor parcel number(s).

2. Size (in acres) of the waste pile management facility and the size of the working surface used to store waste soils (if different than the total size of the waste pile management facility).

3. For existing waste pile management facilities;

   a. A detailed description of the existing working surface, stormwater management features and/or management practices used to prevent stormwater run-on and run-off, management practices to preclude the ponding of water within the waste pile management facility, and operational practices (i.e., waste soil storage practices, dewatering of imported slurries, treatment and processing of waste soils, etc.).

   b. For facilities that do not have an impervious concrete lined working surface, the technical document shall include a proposal for how the Discharger will comply with the Waste Pile Management Facility Specifications of the General Order.

4. For new waste pile management facilities, the technical report shall include a waste pile management facility design plan prepared by an appropriately registered professional and an operations plan defining the stormwater management features and/or management practices that will be used to prevent stormwater run-on and run-off, management practices to preclude the ponding of water within the waste pile management facility, and operational practices (i.e., waste soil storage practices, dewatering of imported slurries, treatment and processing of waste soils, etc.).

5. Describe the known and potential waste streams and volumes of waste soils that will be imported to the facility and the maximum capacity (in cubic feet) of waste soils that the waste pile management facility can manage. When available, this description shall include all historical chemical characterization data collected as part of the expired general waiver program (Order No. R3-2010-0036 and R3-2005-0006) for each waste stream. This historical data shall be presented in a summary table with the analytical laboratory reports attached.

6. Provide a process flow diagram showing the movement of waste soils from importation to the waste pile management facility to beneficial reuse or disposal.

7. Calculate the following values based on data from the nearest weather station that most closely represents the local climate at the facility. Provide the source data for the calculated values, together with the name, location, and period of record of the measuring station.

   a. Maximum, minimum, and average annual precipitation in inches/year;

   b. Mean evaporation in inches/year;

   c. 25-year, 24-hour design storm event.

8. Provide a comprehensive geologic map, geologic cross sections showing lithology and structural features, and discussion of the natural geologic materials in and underlying the location of the waste pile management facility, including identification of lithology, distribution and dimension features, physical characteristics, special physical or chemical features (i.e., alteration other than weathering), susceptibility to natural surface/near-surface processes, and all other pertinent lithologic data, all in accordance with current industry practices.

9. An evaluation of water bearing characteristics of natural geologic materials underlying the waste pile management facility, including known or estimated depths to first encountered groundwater and groundwater flow direction.

10. A topographical scale map showing the location of all water wells and surface water bodies (creeks, rivers, lakes, etc.,) located within a 1-mile radius of the waste pile management facility.

11. Discuss whether the waste pile management facility is located within a 100-year flood plain based on the Federal Emergency Management Agency's (FEMA) designation and any design features to prevent inundation of the waste soils. Include a reference to the appropriate FEMA Flood Hazard Map. Waste pile management facilities located within a 100-year floodplain may be subject to state and/or local land use restrictions and permits.

12. If the Discharger is unable to demonstrate complete containment in accordance with the Waste Pile Management Facility Specifications of the General Order, or selects to conduct groundwater monitoring in lieu of this demonstration, this technical report shall include a groundwater monitoring well installation and sampling plan. This plan shall include the rationale for the type of monitoring, monitoring frequency, spatial distribution of monitoring points, selection of monitoring equipment, construction specifications, procedures for sampling, analysis of the data, and data evaluation. This plan must also include the following:

    a. A map showing the locations of the proposed monitoring system.

    b. Drawings and data showing construction details of the proposed monitoring system.

    c. Construction quality assurance plan to ensure the system will be constructed per approved plans.

    d. Consistent sampling and analytical procedures that are designed to ensure that monitoring results provide a reliable indication of water quality at all monitoring points. At a minimum, the plan shall include a detailed description of the procedures and techniques for:

i. Sample collection (i.e., container types), sampling equipment (i.e., field instruments, pumps, bailers, etc.), equipment calibration, and decontamination of sampling equipment;

ii. Sample preservation and shipment;

iii. Analytical procedures;

iv. Chain of custody control; and

v. QA/QC procedures.

vi. A description of the methods that will be used in evaluating protection of water quality. The specifications for each data analysis method shall include a list of constituents of concern that will be monitored and a detailed description of the criteria to be used for determining “measurably significant” evidence of any release from the operation and for determining compliance.