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Ser 09ER3GK/L4412
28 Sep 1994

Mr. Tom Lanphar
California Environmental Protection Agency
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley, CA 94710 - 2737

Subj: SITE 15 REMOVAL ACTION

Dear Mr. Lanphar:

In your letter of June 2, 1994, you requested information concerning the proposed removal for Installation Restoration (IR) Site 15 at Naval Air Station (NAS) Alameda. This information was required so that you could prepare a California Environmental Quality Act (CEQA) determination for the Removal Action. The following are the responses to your questions. Each question is highlighted in bold text and the Navy response follows in normal type.

1. Please describe the treatment processes planned for PCB and lead contaminated soil in detail.

Response: The company chosen to conduct the soil treatment, BioGenesis, provides a process that uses biodegrading surfactants to remediate PCBs. Their technology remediates the PCBs and lead in a single pass soil washing treatment process. BioGenesis uses pretreatment equipment for particle sizing, a truck mounted soil washer for larger particles, a flat-bed mounted sediment washer for fine particles, and water treatment and reconditioning equipment. Equipment is fitted with an emission control system. Larger soil particles are washed with a batch process, using equipment that combines the contaminated soil and BioGenesis specialty surfactants in a fluidized bed. After mixing, the extracted pollutants encapsulated within the BioGenesis cleaner and wash water are separated from the soil. Finer grained particles are washed using water and the BioGenesis surfactants through a mixing chamber, followed by a scrubber, and then through a hydrocyclone to separate solids from liquids. Wash water is treated through a treatment system so that it can be reused in the process. PCBs are photochemically destroyed in a process that primarily uses UV oxidation, and lead is removed using ion exchange. No chemical residues remain in the soil after treatment.

2. What solvent and acid solution will be used in the treatment processes?

Response: The proprietary BioGenesis cleaning chemicals are mixtures of ionic and non-ionic surfactants and bioremediating agents which act similarly to biosurfactants. BioGenesis reports that the cleaner chemicals are benign and are not characterized as either RCRA or CERCLA hazardous waste or as a hazardous material.

3. How will hazardous substances be stored and what precautions will be employed to eliminate any risk of upset?

Response: All potentially hazardous waste solids, such as excavated soils, residuals from the treatment process, or used personal protective clothing will be placed either within closed containers or upon two layers of 10 mil visqueen and covered. All potentially hazardous liquid wastes will be stored within closed containers that are placed upon two layers of 10 mil visqueen and fully bermed. Potentially contaminated equipment, such as loaders or bulldozers that may be staged outside the exclusion zone, will be parked on two layers of visqueen.

4. How will the on-site treatment facility be transported to the site?

Response: The BioGenesis wash unit and support equipment will be mounted on flat-bed trailers and transported by road to NAS Alameda. The trailers will be loaded at the BioGenesis office in Oak Creek, Wisconsin.

5. Will there be any air emissions from the treatment processes?

Response: BioGenesis reports that their treatment process does not generate any significant air emissions. Although VOCs are not expected to be encountered in the excavated soil at Site 15, an emission control system in the BioGenesis wash unit traps VOCs when cleaning volatile contaminants.

6. Are air permits required?

Response: On June 21, 1994 BioGenesis was granted an exemption from District air permit requirements per Regulation 1 Section 110.6 related to emission points which are not an intended opening and from which no significant quantities of air contaminants are emitted. The exemption was granted by the Bay Area Air Quality Management District, the Permits Services Division.

7. Will the air be monitored for emissions?

Response: According to BioGenesis, the vendor expected to conduct the soil treatment activities, no chemicals will be utilized during soil washing that will create emissions of concern to the environment or to worker health and safety. However, during start-up of the soil treatment process, initial monitoring for volatile organics associated with the slurry

chemicals will be conducted, using photoionization detector, to confirm that exposures do not exist or are below California OSHA criteria.

Routine monitoring of air emissions is expected to be limited to screening for PCBs and lead. Work areas will be chosen by the Site Health and Safety Officer as locations to screen for the two constituents, using industrial hygiene testing, to confirm that worker exposure is below California OSHA criteria. Samples taken for worker exposure to lead will also be analyzed for total dust, to screen particulate levels in the atmosphere.

Further screening in the work area will include noise monitoring, utilizing a noise dosimeter. Noise monitoring will be done in the vicinity of soil excavation and near the air compressor associated with the soil treatment unit. Additional monitoring of air emissions or other aspects of worker health and safety may be considered necessary during the project at the direction of the Program Certified Industrial Hygienist.

8. How will residuals of the treatment process be stored, transported and disposed of?

Response: Following completion of soil treatment operations, the UV oxidized and ion exchanged water from the treatment process will be used for rinsate in final decontamination of the wash unit. Following this procedure, the wastewater will be UV oxidized a final time, analyzed, verified clean, and disposed of through the sanitary sewer system.

During the final decontamination process, BioGenesis will begin to dismantle the treatment system. An estimated one cubic yard or less of residual sediment may be contained in the treatment system's individual units. BioGenesis will stockpile the sediment on 20 mil HDPE or visqueen for characterization. Once the sediment has been characterized, it will be either added to the stockpile of treated, satisfactorily remediated soil to be used as backfill or will be disposed of in a Class I or Class II landfill. The waste would be manifested and transported to the appropriate disposal facility in 55-gallon drums by a certified waste hauler in accordance with State and Federal regulations.

The only other residual wastes anticipated to be generated during soil treatment are contaminated gloves, tyvek, possibly other personal protective gear, rags and similar wastes. Such contaminated waste solids will be stored in 55-gallon drums, manifested and transported to a Class I landfill by a certified waste hauler in accordance with regulations.

9. Excavated soil will be stockpiled prior to treatment. How and where will the soil be stored? What precautions will be taken to eliminate surface water runoff and wind dispersion of contaminated soil?

Response: Prior to treatment, excavated soil will be stockpiled in a staging area that will be prepared in the southeast corner of Site 15, within the exclusion zone. The area will be roughly graded and smoothed, then covered with two layers of 10 mil HDPE or visqueen.

It will be approximately 50 feet by 50 feet in surface area. Soil will be transported to the stockpile in an excavator bucket directly after excavation. The stockpile will be covered with visqueen at the end of each working day or during periods of high wind velocities.

To control stormwater runoff and erosion, the work areas within the exclusion zone will be graded during site preparation to promote drainage of surface water toward the interior of the site. Because the project will be conducted in the early fall months, significant rainfall is not expected. However should rainwater accumulate in the excavation, the water will be pumped through a flexible hose into 55-gallon drums, then accumulated in a Baker tank, sampled and analyzed. The water will be disposed of at the end of the project in a manner appropriate to the analytical findings, but presumably in the industrial wastewater pretreatment system in Building 5 at NAS Alameda.

A water truck will be used to intermittently sprinkle the excavation, stockpile area, access road and parking areas during project operations to control fugitive dust emissions. In addition, all stockpiled material, including the excavated soil, will be covered at the end of each workday. As an additional aid in dust control, movement of vehicles and heavy equipment through the work areas and along the access road will be carefully monitored and restricted by the Project Superintendent in order to reduce unnecessary emissions. If wind speeds attain a velocity that creates excessive dust generation, the Project Superintendent will temporarily cease excavation operations.

If you have any additional questions regarding this removal action, please feel free to contact Mr. George Kikugawa at (415) 244-2559, Fax (415) 244-2553.

Sincerely,

Original signed by:

CAMILLE GARIBALDI
Head, BRAC III East Bay

Copy to:
California Regional Water Quality Control Board (Attn: James Nusrala)
US Environmental Protection Agency (Attn: James Ricks)
NAS Alameda (Attn: Lt. Mike Petouhoff)
NAS Alameda (Attn: Sherri Withrow)
NAS Alameda (Attn: Teresa Bernhard)

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