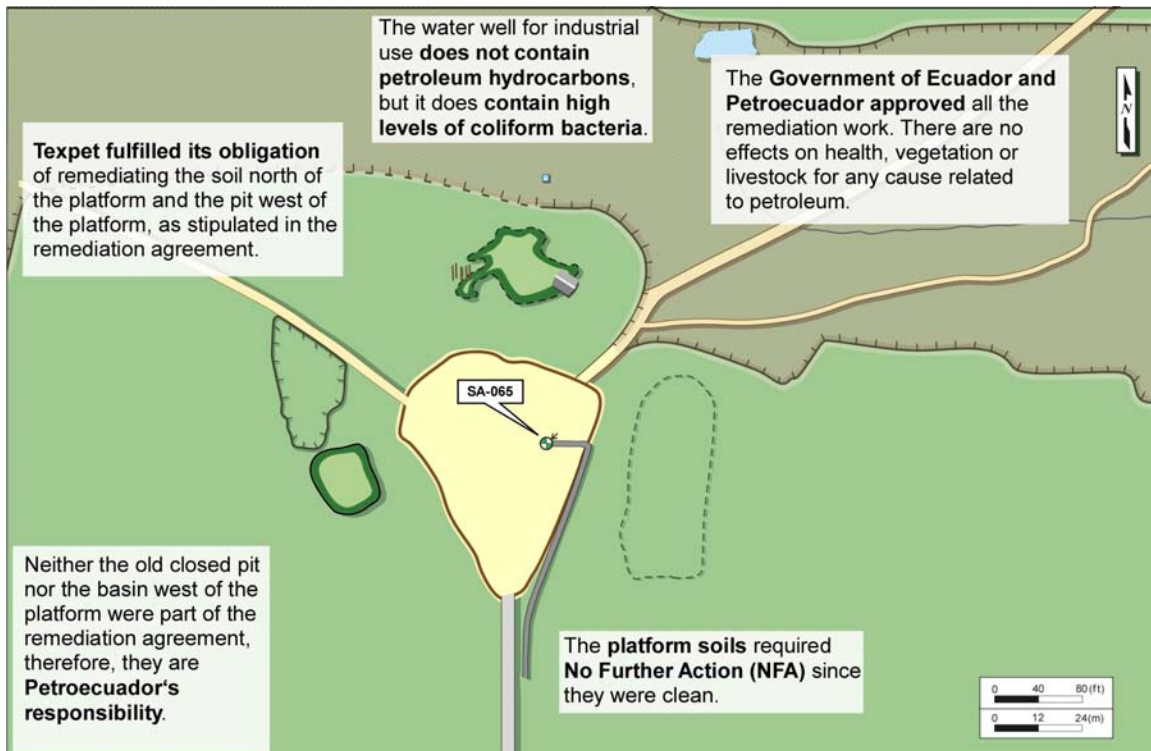


Report of Expert Witness Mr. Ernesto Baca, P.E. Judicial Inspection of the Sacha-65 Well Site

María Aguinda et al v. ChevronTexaco Corporation
Proceeding No. 002-2003, Superior Court of Justice, Nueva Loja, Ecuador

1 EXECUTIVE SUMMARY



The main conclusions of the Judicial Inspection of the Sacha-65 (SA-65) well are summarized in the illustration above and the report below.

The September 1995 Remediation Action Plan, agreed to between Texaco, the Government of Ecuador and Petroecuador, required performing the following tasks at the SA-65 well site:

- Remediation of soils north of the SA-65 well site, and
- Remediation of soils on the platform of the SA-65 well site.

In 1995, the soils of the platform were designated as soils requiring No Further Action (NFA), since they were found to be clean. One year later, in 1996, remediation of a pit west of the platform was added.

All the tasks were performed to the satisfaction of the Ecuadorian Government and Petroecuador and were verified immediately after the remediation and now, during the Judicial Inspection of November 18, 2004. The soils and the pit were remediated, while the platform soils were designated as soils requiring No Further Action (NFA). The soils and the pit complied with the criteria of the Remediation Action Plan (RAP) for petroleum leachates (*TPH — TCLP*).

Furthermore, the pit also complied with the criterion for concentration of total petroleum hydrocarbons (TPH). In addition, these two remediated areas complied with the international criteria applicable to all the hydrocarbon parameters of the time. The crude remaining in the two zones is in a highly weathered condition, it is immobile, and it is not bioavailable. There are no heavy metals that exceed the natural concentrations of the soils. Consequently, the residual petroleum does not pose a hazard to human health, plants, animals or the environment surrounding the remediated areas. Texaco Petroleum Company (Texpet) was relieved of all obligations, liabilities and complaints related to the SA-65 well site as stated in the records (i.e., Actas) issued on November 22, 1996 and October 16, 1997 (see Appendix F). The rest of the remediation and other remaining tasks were assumed by Petroecuador.

During the Judicial Inspection of November 18, 2004, petroleum was found in a previously closed pit located east of the platform and in a basin west of the platform. Neither of these areas was part of the Remediation Action Plan. Consequently, they were not part of the remediation. These areas were not Texpet's responsibility, since they were never included in the Scope of Work (SOW) or in the Remediation Action Plan (RAP). However, during the Judicial Inspection, sampling of the two areas determined that the petroleum in these zones is in a highly weathered condition. In addition, it was determined that the petroleum that was found in these areas does not pose a risk to health, since it is in a highly weathered condition and does not contain the most toxic petroleum components (Polycyclic Aromatic Hydrocarbons-PAHs) or benzene, toluene, ethyl-benzene and xylene (BTEX) above the international evaluation limits. Neither the vegetation nor the livestock has been affected by the petroleum remaining around the SA-65 well site.

The platform has an entirely flat relief. North of the platform, there is the Moises family house, the only one in the area. North of the Moises family's house, a cliff running in the East-West direction, approximately 3 meters high, can be seen. Thus, a large part of the area north of the Moises family's house is at approximately 3 meters below the platform level, where there is a cinder block factory belonging to that family. The cinder block factory is located in a sand mine area. Related to the block factory, there is a water well from which part of the water necessary to operate the factory is obtained. The additional water used in the plant comes from a small source of surface water north of the plant.

For domestic purposes, i.e., for cooking, personal hygiene and leisure, the Moises family uses water from a small lagoon approximately 500 meters east of the wellheader. Because of its immobility, absence of soluble components and the great distance from the source, it is clear that the weathered petroleum cannot impact the lagoon. The industrial water well, which was built approximately 2 months before the judicial inspection, fills with rainwater that runs inside of it, and it is not impacted by petroleum. However, it does have a high level of coliform bacteria, both fecal and total.

There are no significant surface water sources near the SA-65 well site. The nearest body is the Jivino Rojo River, which is more than 800 meters east of the platform. During the Judicial Inspection of SA-65, the SA-138 site, which had a fresh spill of petroleum due to the cutting of pipe, was visited. The SA-138 well is approximately 1000 meters from the Jivino Rojo River. It is also impossible for any petroleum from either of these two places to have reached the Jivino Rojo River because of the immobility, low solubility of the petroleum and irregular topography between these points.

In summary, the following conclusions can be reached:

- There are no persons directly exposed to hydrocarbons, since the two remediated areas have a clean layer of soil that covers the remediated material.

- The weathered hydrocarbons that are contained in the remediated material do not pose a risk to the health of persons or the environment. To confirm this, scientific tests and assays were performed, and they show the following:
 - The chemical composition of the Sacha petroleum indicates that the metals are in concentrations that are even lower than typical soils and that would not cause a significant increase in the concentration of metals in the soil.
 - The components of interest, with potential toxicity in the Sacha crude, are common to all crudes around the world: BTEX and PAH. These components are significantly and rapidly weathered by natural weathering mechanisms in tropical environments, like the environment of eastern Ecuador, thus reducing the potential of toxicity and mobilization of the hydrocarbons.
 - All the results showed the practically absolute absence of BTEX, the disappearance of light and mobile fractions and weathering of nearly the entire content of PAHs with respect to fresh Sacha crude.
- The solubility of the weathered crude is extremely low in water.
- Conservative estimates of volatilization of hydrocarbons indicate that the volatile fractions have been weathered, and the projected concentrations are minimal.
- The risk evaluations, involving the investigation of the routes of exposure to such hydrocarbon traces, indicate that:
 - Direct exposure: it is not possible because the remediated soil is covered with soil more than 0.90 meters thick. However, when considering the scientifically developed models to predict exposure through direct contact, ingestion or inhalation and assuming that the remediated soil was at the surface, the results indicated that the doses are not sufficient to hurt the health of persons.
 - Exposure from drinking groundwater or surface water: the crude is not mobile because it does not exist in liquid form in the areas remediated by Texpet. In evaluating the exposure through leaching to the groundwater and surface runoff, it was found that the BTEX and PAH values calculated in the most conservative way are not sufficient to cause risks to health. This weathering rapidly eliminates the most mobile and toxic light fractions of petroleum. The results that were obtained indicate the following:
 - The crude is not mobile in the remediated area north of the platform or in the pit west of the platform.
 - In evaluating the exposure through leaching to the groundwater and surface runoff, it was found that the BTEX and PAH values calculated in the most conservative way are not sufficient to cause risks to health. This weathering rapidly eliminates the most mobile and toxic light fractions of petroleum.