EnviroReporter.com **analysis of Runkle Canyon documents and tests - KB Home-supplied 41 reports**

This timeline analyzes 41 reports that KB Home supplied to DTSC as part of their "Voluntary Cleanup Agreement" of Runkle Canyon in December 2007. DTSC is the lead agency to oversee a new agreement that would clean up the Santa Susana Field Laboratory up to strict EPA Superfund standards. *EnviroReporter.com* submitted a partial analysis of these documents to DTSC on July 3, 2007 followed by a complete analysis of them on July 6, 2007.

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December 18, 2007: Runkle Canyon_Dade Moeller_Sr 90 Sampling Report_121807

Dade Moeller's tested 63 soil samples from Runkle Canyon for strontium-90. Test results are so low that they average a quarter of normal background for strontium-90 in area. On January 7, 2008: Radiation Ranger Rev. John Southwick questioned the city of Simi Valley as to how both Dade Moeller and the city's lab, Environmental Inc. Midwest Laboratory, could have come up with such low results for strontium-90 in Runkle's soil.

Southwick wrote:

"KB Homes has tried to assure the citizens of Simi Valley that the land is safe from Sr-90 contamination and generated their own Dade Moeller report which shows an average of 0.014 pCi/g for the 63 soil samples collected during the October 2007 sampling. This average is just 26.9% of the EPA's background number for strontium-90 in the area – over 100 times less than what was tested for in 1999 by the developer's lab.

"The Dade Moeller report, shared with us after you provided it to Collins, also deserves explanation as it is just 10 pages and does not show, among other things, the kind of laboratory analysis that was performed. We request that you ask KB Homes for the entire report and that they provide it in the spirit of openness and trust that KB Homes claims to be attempting to create with the citizens of Simi Valley."

EnviroReporter.com. concurs with these concerns noted in Southwick's following/linked letter:
Southwick demands explanation of suspect strontium-90 readings.

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October 30, 2007: Runkle Canyon_Larry Walker_Water Quality Issues Lttr_103007

Larry Walker Associates' Tetra Tech analysis for Simi Valley deems Runkle Canyon safe. "None of the surface waters in the Simi Valley area," the analysis says, "are designated as having a [Municipal and Domestic Supply] beneficial use. Therefore, the State drinking water standards do not apply to Runkle Canyon or downstream surface waters."

However, the very Tetra Tech report it was supposed to analyze says "Potential human consumption of surface water is reasonably possible under the Municipal and Domestic Supply, Water Contact Recreation, and Non-contact Water Recreation beneficial use scenarios. In these types of situations, water quality criteria, such as the MCLs, PRGs, PHGs, and NLs, may be used as screening values to determine whether further evaluation of surface water may need to be considered."

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October 26, 2007: Runkle Canyon_L33278_Report of Analysis_1026207

This Teledyne Brown Engineering, Inc. document contains a section of the data that makes up the Dade Moeller report dated December 18, 2007 commented on above.

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October 26, 2007: Runkle Canyon_L33276_Report of Analysis_102607

This Teledyne Brown Engineering, Inc. document contains a section of the data that makes up the Dade Moeller report dated December 18, 2007 commented on above.
Project ID# KB001-3EREG-07

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October 26, 2007: Runkle Canyon_L33284_Report of Analysis_102607

This Teledyne Brown Engineering, Inc. document contains a section of the data that makes up the Dade Moeller report dated December 18, 2007 commented on above.
Project ID# KB001-3EREG-07

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October 26, 2007: Runkle Canyon_L33277_ Report of Analysis_102607

This Teledyne Brown Engineering, Inc. document contains a section of the data that makes up the Dade Moeller report dated December 18, 2007 commented on above.
Project ID# KB001-3EREG-07

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October 25, 2007: Runkle Canyon_L33275_Report of Analysis_102507

This Teledyne Brown Engineering, Inc. document contains a section of the data that makes up the Dade Moeller report dated December 18, 2007 commented on above.
Project ID# KB001-3EREG-07

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October 24, 2007: Runkle Canyon_L33274_Report of Analysis_102407

This Teledyne Brown Engineering, Inc. document contains a section of the data that makes up the Dade Moeller report dated December 18, 2007 commented on above.

Project ID# KB001-3EREG-07

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August 10, 2007: Runkle Canyon_Geocon_Summary of Arsenic and Other Metals Results_81007

KB Home's consultant, Geocon Consultants, Inc. 1) mischaracterizes the amount of heavy metals found in Runkle Canyon by using a set of standards not as protective of public health as the EPA's "preliminary remediation goals" (PRG). 2) The consultant incorrectly compares background values from various reports instead of utilizing the benchmark Kearney report on California soils partly written by DTSC. 3)Also, Geocon does not include the Radiation Ranger's May 18, 2007 report in its analysis even though the lab used by the Rangers, Pat-Chem, was the same lab the city of Simi Valley used on July 2, 2008, the report of which is included in the consultant's analysis.

1. Geocon compared the heavy metal results to the California Environmental Protection Agency (Cal-EPA) California Human Health Screening Levels (CHHSLs) for residential land use. The developer's consultant fails to note CHHSL's disclaimer which reads in part:

This document is not intended to establish policy or regulation. The Human Health Screening Levels presented here are not to serve as: 1) a stand-alone decision making tool, 2) a substitute for guidance for the preparation of baseline human health risk assessments, 3) a rule to determine if a waste is hazardous under the state or federal regulations, 4) a rule to determine when the release of hazardous chemicals must be reported to the overseeing regulatory agency, 5) set of final cleanup or action levels to be applied at contaminated sites or 6) a guarantee that an oversight regulatory agency will determine that a project is adequately studied or agree with the conclusions of the site investigation and risk assessment report.
[snip]
The CHHSLs should NOT be used to determine when impacts at a site should be reported to a regulatory agency. [their emphasis]

Yet the report notes that "Arsenic is the only metal reported for the soil samples and asphaltic material sample at concentrations in excess of CHHSLs. The CHHSLs for arsenic, which are 0.07 milligrams per kilogram (mg/kg) for residential land use…"

However, the EPA's PRG for arsenic in residential soil is 0.062 mg/kg meaning that the **Ranger's result of 34 mg/kg was 548 times this and the city of Simi Valley's lower result was still more than 20 times the PRG**.

As we have noted below and in our articles, there were significantly high amounts of nickel, vanadium, barium, cadmium, chromium and lead found in both the Rangers' and the city of Simi Valley's tests as well..

2. Geocon used the wrong background numbers for comparison to the Runkle Canyon results. According to the Kearney report, for example**, arsenic averages 3.5 mg/kg in California soil making the 34 mg/kg result nearly ten times that**. According to the September 2005 "Soil Background Report" for the Santa Susana Field Laboratory for Boeing, NASA and the Department of Energy, Table 4.1 shows the lab's average reading for arsenic, from 41 samples tested, is 5.246 mg/kg which the 34 mg/kg result exceeds by over six times. These are more accurate background comparison values than the ones Geocon used.

3. By not including the Rangers' Pat-Chem report, Geocon has skewed the results even though the lab's limited sampling was just as valid as the city of Simi Valley's limited sampling.

The preceding information, and the information of our Runkle Canyon Investigation, *EnviroReporter.com* maintains that Geocon is making a false conclusion at the end of the soils part of its report that isn't based on sound science and also ignores an obvious possible source for the contamination - Rocketdyne:

Based on the reported historic use of the Site there does not appear to be a potential man made source of the arsenic reported in the soils. Because the reported concentrations of arsenic fall within the published ranges of naturally occurring arsenic, and the fact that a potential man made source for arsenic at the site is not apparent from the reported historical use of the property, it is our opinion that the arsenic reported in the soil is naturally occurring and does not warrant additional investigation.

Geocon's analysis of heavy metals found in Runkle Canyon surface water is disingenuous and misleading. In part, it states:

Vanadium was the only metal present in the water samples at concentrations exceeding MCLs or PRGs. There is no established MCL for vanadium. Concentrations of vanadium exceeding the PRG of 0.036 milligrams per liter (mg/l) were reported for two of the surface water samples collected at the Site. However, PRGs are screening levels for use in evaluating tap water. Because the proposed development for the Site does not currently include plans to supply drinking water to the development from onsite sources it is our opinion that further evaluation with respect to the concentrations of vanadium in the surface water is unwarranted. Should plans for the development change to include use of the surface water for water supply, the Client is advised that continued monitoring for metals and treatment for vanadium may be required prior to delivery of the water to consumers.

The first two sentence of the preceding paragraph are obviously contradictory. In addition, the rest of the paragraph paints a false picture. *EnviroReporter.com* failed to note in previous analysis that the Notification Level (NL) for vanadium is 0.015 mg/l according to the Office of Environmental Health Hazard Assessment (OEHHA).

The NL is a tripwire level where the local water purveyor advised to warn consumers of "presence of the contaminant and about the health concerns associated with its exposure," according to California Department of Health Services (CDHS) which has a higher level for vanadium's NL. This has not occurred in Simi Valley.

According to OEHHA:

Staff of the Office of Environmental Health Hazard Assessment (OEHHA) have reviewed the Department of Health Service's proposed action level of 50 ug/L of vanadium, derived from the U.S. Environmental Protection Agency's (U.S. EPA) Health Effects Assessment Summary Tables (HEAST), fiscal year (FY) 1997 (U.S. EPA, 1997). OEHHA does not concur with this proposed Notification Level, and recommends that the Notification Level be set at 15 ug/L of vanadium.

The Tetra Tech report notes that the July 2, 2007 city of Simi Valley sampling yield surface water vanadium readings of 0.096 mg/kg, 0.062 mg/kg, 0.14 mg/kg and 0.11 mg/kg.

The highest reading is 9.33 times the OEHHA's NL for vanadium and 2.8 times the CDHS vanadium NL. The average reading of these four samples is 0.102 which is 6.8 times the OEHHA NL for vanadium and double the CDHS vanadium NL.

Despite these facts, Geocon goes on to anecdotally compare Runkle Canyon's surface water vanadium levels to the background concentrations of the contaminant in the groundwater of 12 California Air Force Bases. This is specious and misleading.

In the "Document Summary" of this Geocon document, the consultant continues to misuse CHHSLs and mischaracterize background values for arsenic. However, it is notable that **Geocon itself collected a surface water sample that contained the highest amount of vanadium sampled in Runkle Canyon to date: 0.17 mg/kg. The Geocon vanadium result is 12.67 time OEHHA's NL and 3.4 times the CDHS vanadium NL.**

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July 26, 2007: Runkle Canyon_Geocon_ Surface Water and Soil Sampling Results_72607

EnviroReporter.com's analysis of this sampling event is contained in the discussion above, dated August 10, 2007 and entitled "Runkle Canyon_Geocon_Summary of Arsenic and Other Metals Results_81007."

As it did in its summary, Geocon mischaracterizes the amount of heavy metals found in Runkle Canyon by using a set of standards not as protective of public health as the EPA's "preliminary remediation goals" (PRG).The consultant again incorrectly compares background values for heavy metals instead of utilizing the benchmark Kearney report on California soils.

There are a number of details in this July 26, 2007 report worth noting. On page 4 of 42 pages total, the Geocon document correctly states the following:

Notification Levels are advisory levels for water purveyors and are not enforceable standards. If a chemical is detected above its Notification Level, then a water purveyor is required to notify the local government agency. Further, if a Notification Level is exceeded, then the CDHS recommends that the water purveyor inform its customers and consumers of the presence of the chemical and the potential health concerns associated with exposure to it. Vanadium is the only metal detected for which there is an established Notification Level. The concentrations of vanadium of 0.064 and 0.17 mg/l, respectively reported for the two water samples Creek 1 and SW-2 exceed the Notification Level of 0.05 mg/l.

There has been no indication as of the time of sending this *EnviroReporter.com* analysis to DTSC, July, 3, 2008, that the water purveyor has fulfilled this recommendation.

On page 24 of this report, there is a notation under "Special Instructions/Comments" that says "LAB TO FILTER METALS SAMPLES" which is not explained. *EnviroReporter.com* cannot determine at this time if this filtering skewed the results lower than they actually are. We would recommend that DTSC ask Geocon Project Manager, Michael Conkle, why these samples were filtered. This filtering is again referred to on page 42, the last page of this report, also by Conkle.

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July 13, 2007: Runkle Canyon_Geocon 70207 Surface Water and Soil Sampling_71307

This report, as noted above, Geocon again mischaracterizes the amount of heavy metals found in Runkle Canyon by using a set of standards not as protective of public health as the EPA's "preliminary remediation goals" (PRG).The consultant again incorrectly compares background values for heavy metals instead of utilizing the benchmark Kearney report on California soils.

There are a number of details in this July 13, 2007 report worth noting. On page 3 of 26 pages total, the Geocon document says:

The laboratory was directed to filter and preserve the water samples we collected ("Downstream A," and "Upstream A") upon receipt.

Geocon does not state who directed it to filter the water samples or why.

On the same page, 3, of this report, Geocon states:

None of the four water samples submitted were reported to contain concentrations of arsenic equal to or greater than the laboratory reporting limit of 0.010 milligrams per liter (mg/l).

The four water samples Geocon analyzed were "split-samples" that the sampling lab, Pat-Chem also analyzed with arsenic results ranging up to 0.18 mg/l. This means that Geocon's result is less than 1/18th that of Pat-Chem's result for the same water sample. Another lab, AETL, also tested these same split samples and had two identical results of 0.12 mg/kg. Geocon's result is less than 1/12th that of AETL's result for the same water sample.

These significant discrepancies bring into serious question the accuracy of Geocon's lab analyses. These discrepancies also extend to their analysis of other heavy metals in the split-samples of surface water and soils.

Indeed, the Geocon and Dade Moeller reports seem to fit a pattern of contamination results that are either a fraction of the split-samples they have tested and/or are just a fraction of previous developers' labs results. The Radiation Rangers maintain that this is more than enough reason for KB Home to be required to perform an entirely new Environmental Impact Report. *EnviroReporter.com* concurs with this opinion.

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April 5, 2007: Runkle Canyon_RWQCB_Approval to Abandon Wells_40507

According to this report:

In addition to perchlorate all samples were analyzed for n-nitrosodimethylamine (n-NDMA). Initial groundwater samples were also analyzed for volatile organic compounds VOCs. One groundwater sample collected from M\V-2 in March of 2006 contained 2.8 nanograms per liter ng/L n-NDMA.
[snip]
The [NDMA] detected concentration is also below the DHS Notification Level 10 ng/L and the California Office of Environmental Health Hazard Assessments Draft Public Health Goal 3 ng/L.

EnviroReporter.com considers the RWQCB decision to abandon these wells to be a mistake considering the perchlorate, trichloroethylene and now NDMA that has been detected in Runkle Canyon groundwater. The Radiation Rangers concur and recommend that the wells again be monitored for these and other contaminants.

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November 29, 2006: Runkle Canyon_RWQCB_Army Corp of Engineers Notification Letter_112906

The RWQCB's Executive Officer Jonathan Bishop states in this document:

The results of prior sampling and analysis were provided the Regional Board in earlier reports. The wells were installed in May 2004, at the request of the Regional Board, to permit groundwater sampling, with correct field techniques, to determine if perchlorate

was present in groundwater beneath the site. No significant perchlorate has been detected in groundwater.

This statement is false. The July 22, 2004 *Los Angeles CityBeat/ValleyBeat* cover story "Two Mile Island" addresses this issue:

Despite the failure of the Ahmanson Ranch development and the fierce opposition to Rocketdyne ever being developed for housing without a stringent cleanup, three developments are springing up within two miles of SSFL. The drainage for the dioxin-polluted Old Conservation Yard at the lab heads down toward a newly approved housing project in Runkle Canyon. The project is slated for 461 homes within a mile of the radiological area of SSFL – much closer than Ahmanson Ranch. Samples collected January 8 during an environmental review of a 550-acre portion of the 1,595-acre site, indicated levels of perchlorate at 50 ppb and 60 ppb in two of four groundwater/silt specimens. This is approximately double the 28 ppb reading of perchlorate found in the groundwater under Ahmanson Ranch.

The above article snip is based upon the results of a January 8, 2003 groundwater sampling done by Miller Brooks, on page 15 of the 146-page PDF that is linked and analyzed in the September, 17, 2003: Runkle Canyon_Miller Brooks_Surface Water&Groundwater Sampling Rpt_91703 entry analyzed below.
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June 6, 2005: Runkle Canyon_Miller Brooks_March 2006 Groundwater Sampling Activities_60605

Note: DTSC has this report listed as March 6, 2005 (instead of 2006)

P. 1/70: *EnviroReporter.com* does not agree with Miller Brooks recommendation, later agreed to by LARWQCB, that wells MW-1 and MW-2 be no longer tested and abandoned because there is ample evidence that the groundwater of Runkle Canyon should be monitored for the foreseeable future due to the high levels of perchlorate previously found, and the verified presence of TCE, NDMA and other potential contaminants of concern.

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September 6, 2005: Runkle Canyon_Geocon_Phase I & Limited Sampling_90605

P. 5/150: *"Analytical results of surface water samples collected from East and West Seeps in Fishtail Area that are not produced in a report. Samples were collected by Miller Brooks on April 5, 2005."*

P. 7/150: *"Perchlorate was detected at a concentration of 0.33 micrograms per liter (µg/l) in a duplicate sample during the first sampling event. According to the laboratory this reported concentration should be considered suspect based on retention time drift*

and potential co-elution of an interfering constituent. None of the other samples or duplicate samples were reported to contain perchlorate."

That equals 330 ppb in groundwater. Ahmanson was 28 ppb therefore Runkle is over 11 times more.

According to OEHHA at http://www.oehha.org/public_info/facts/perchloratefacts.html the Public Health Goal is 6 ppb in drinking water.

Runkle Canyon groundwater has tested as high as 55 times the Public Health Goal for perchlorate.

P. 7/150: *"Historic pumping depressions at Rocketdyne have limited the movement of degraded groundwater beneath the property and have essentially confined the extent of known groundwater contamination to the area beneath the facility. Offsite migration of degraded groundwater has been identified in isolated areas along the northwest and eastern property boundaries. The perchlorate plume reportedly extends offsite of the facility to the east and southeast (southeast of the Runkle Site). The TCE in groundwater is reportedly present in several well-defined plumes that remain predominately beneath the Rocketdyne facility with a limited area offsite to the north of the western end of the property (west of the Runkle Site).*

The preceding contradicts itself on one of the biggest points - offsite migration of degraded groundwater. Which is it? If the lab doesn't know, or does and decides to mischaracterize the situation even while contracting itself, the lab's veracity is questionable.

P. 7/150*: "Miller Brooks collected soil samples along the western border of the Site, adjacent to the Rocketdyne facility. Low concentrations of toluene, xylene, mercury, and dioxin were reported in several of the samples collected. The reported concentrations on these constituents were all below their respective PRGs."*

PP. 7-8/150: *"Surface water and groundwater on the Runkle Canyon Site have been tested to evaluate the presence of constituents of concern potentially originating from the Rocketdyne facility. Samples have been collected from the on site stream and from a number of springs present on site. Water samples have been analyzed for TPH, VOCs, SVOCs, PCBs, perchlorate, NDMA, and metals. Perchlorate was reported in a duplicate groundwater sample as described above. NDMA was reported in one groundwater sample collected from an onsite monitoring well in July 2004, however the results should be considered suspect due to laboratory blank contamination. Subsequent groundwater samples collected from this well did not contain reportable concentrations of NDMA. No other reportable concentrations of other constituents were found in any of the water samples collected at the site with the exception of metals at concentrations typically found in groundwater."*

While quick to discount positive results for contaminants, Geocon isn't as careful with its characterization of contaminants onsite. "Perchlorate was reported in a duplicate sample above" does not take into account several detections of it. The last sentence is false in two ways: TCE has been detected in the groundwater and the metals greatly exceed concentrations typically found in groundwater.

P. 8/150*: "Based on the reported results Foster Wheeler concluded that the cesium-137 and strontium-90 concentrations reported in the samples were not a concern when compared to exposure limits considered by the EPA to be protective of human health."*

This sentence is literally true yet totally misleading as "Neighborhood Threat" shows. Yet another example of Geocon's imaginative way of not analyzing results already ascertained by the developers' lab but also mischaracterized. The numbers speak for themselves as our investigation has repeatedly shown.

P. 8/150: *"**In 2000 Harding ESE** collected an additional fourteen samples from the 715-acre parcel of the Site, two samples from the 350-acre parcel, and one just east of the 550-acre parcel to evaluate the presence of radionuclides. Based on the results Harding concluded that the property was not likely contaminated with tritium or cesium-137. They were **unable to make a definitive conclusion regarding strontium-90 and recommended further sampling**."*

This conclusion will be addressed in *EnviroReporter.com*'s analysis of the 2000 Harding ESE.

PP. 8-9/150: *"In 2003 Miller Brooks collected an additional 27 soil samples from the Site and three from offsite that were evaluated for strontium-90. Only two of the soil samples contained detectible concentrations of strontium-90. Based on this data Miller Brooks concluded that reported concentrations were below levels considered to pose a health risk. Groundwater and surface water samples collected during these investigations were analyzed for tritium. The reported concentrations of tritium in the water samples were concluded to be below levels considered by regulatory agencies to pose a health risk."*

This is a notable instance where Geocon cites this study, repeatedly stating that samples were concluded to "be below levels considered by regulatory agencies to pose a health risk," yet in the very next summation notes that the lab Dade Moeller didn't include the 2003 Miller Brooks study because "the higher minimum detectable activity reported by the laboratory." This misleading Geocon entry also fails to note that the city of Simi Valley used this 2003 Miller Brooks study as the basis of its EIR.

P. 9/150: *"In all cases the risk was calculated to be less than the target risk level of one in one million (1 X 10-6)."*

This is indeed the "target risk level," which the California Department of Health Services **(CDHS) later determined to be nearly five times that from strontium-90 in the site's soil.** The Runkle Canyon EIR, however, states that this risk is 0.77 in a million, a figure

later amended, without explanation, to 0.26 in a million, or 1/18th of what CDHS says. These are more instances of the developers' labs basically asserting safety levels not based on ascertainable fact.

P. 11/150: *"Benzene, toluene, and ethylbenzene were detected at concentrations of 35, 62, and 27 micrograms per kilogram (µg/kg). No additional VOCs were detected at or above laboratory detection limits (ND). The United States Environmental Protection Agency, Region 9, residential Preliminary Remediation Goals (PRGs) for benzene, toluene, and ethylbenzene in soil are 640 µg/kg, 520,000 µg/kg, and 400,000 µg/kg, respectively. None of the reported concentrations exceed their respective PRGs. No additional VOCs were detected at or above laboratory detection limits (ND)."*

In the preceding paragraph and on page 20/150 of the report's PDF, Geocon writes "micrograms per kilogram (µg/kg)" which is incorrect. The designation "µg/kg" indicates parts per billion. We cannot explain this basic mistake but it does fit with a pattern in the body of Geocon reports presented by KB Home to DTSC that contain inaccuracies, omissions and incorrect conclusions, all of which undermine confidence in the developers' conclusions about the environmental conditions at the site.

P. 17/150: *"Groundwater contamination originating on the Rocketdyne facility reportedly has migrated offsite to the southeast, into the San Fernando Valley, and to the north, east of Runkle Canyon, into Simi Valley. Based on the reported magnitude and direction of degraded groundwater originating from the Rocketdyne facility and the results of soil, surface water, and groundwater samples collected from within Runkle Canyon it does not appear that the historic sources originating from the Rocketdyne facility are adversely affecting the Runkle property."*

This unsubstantiated statement is not supported by the facts of tests before and after this report was created. Indeed, we reported this several months before this report in "Neighborhood Threat" where we wrote:

In December 1998, when GreenPark began its environmental investigation of the property, the developer hired Phoenix-based QST Environmental to do preliminary soil sampling of the canyon to see if the former Rocketdyne lab "had impacted on-site soils, based on surface run-off carrying radionuclides to the site." The results "indicated the presence of Strontium in all samples collected … that exceeded the EPA average local background concentration." Indeed, the four soil samples contained up to 17 times the amount of the radionuclide that the EPA says is naturally occurring in the area. "Based on the analytical results of the soil samples, it would appear that there may have been some impact of radionuclides to the site from the Rocketdyne facility," the report said.

P. 18/150: *"Geocon contacted the Los Angeles Regional Water Quality Control Board (RWQCB) to inquire on the status of groundwater investigations being performed at Runkle Canyon. According to department staff, the RWQCB is not currently overseeing any programs at the Site. The RWQCB did request that Green Park sample and provide groundwater data; however, an order was never issued by the board."*

The RWQCB seems remiss in its request for groundwater sampling and data that was not acted upon. The Radiation Rangers have expressed concern that DTSC might also not fully investigate the site's groundwater but are still withholding judgment.

P. 19/150: *"Based on the results of results of the surface and groundwater sampling performed on the Site it does not appear that the degraded groundwater reportedly present on the Rockerdyne [sic] facility is migrating onto the Runkle Site."*

This conclusion is incorrect: Runkle Canyon groundwater has had significant detections of perchlorate, NDMA and TCE. Also, as our story "The Radiation Rangers" shows, the developer did not test surface waters of the canyon's stream at the time of this report's issuance so any characterization of the surface water is speculative and false. It is worth noting that Geocon uses the conditional phrase "does not appear" which makes the entire statement speculative versus definitive.

P. 19/150: *"Concentrations of TPH in the diesel to motor oil range, ranging from 14 mg/kg to 320 mg/kg, were reported in five of the samples analyzed. The metals concentrations reported in the soil appear to be at background concentrations, with the exception of two samples reported to contain mercury at concentrations of 0.22 and 0.24 mg/kg. The Preliminary Remediation Goal (PRG) for mercury in residential soil is 23 mg/kg."*

EnviroReporter.com wasn't aware of these results until reading this. The significance of the results isn't analyzed as far noting how far above background the mercury is or the relative significance of the TPH results.

P. 20/150: *"The report concludes that construction and operation of the proposed Runkle Canyon Development would result in very low radiological risk from strontium-90 exposure to residents, visitors, and neighbors. In all cases the risk was calculated to be less than the target risk level of one in one million (1x10-6)."*

The California Department of Health Services has concluded that the strontium-90 in Runkle Canyon soil and dust would create a cancer risk nearly five times this, at about 5 x 10-6.

P. 20/150: *"Geocon analyzed a sample of the tarry material for total petroleum hydrocarbons (TPH) extended range by modified EPA method 8015B, volatile organic compounds (VOCs) by EPA method 8260B, and polycyclic aromatic hydrocarbons (PAHs) by EPA method 8310. The sample exhibits a total combined TPH concentration of 102,130 mg/kg. Benzene, toluene, and ethylbenzene were detected at concentrations of 35, 62, and 27 micrograms per kilogram (µg/kg). No additional VOCs were detected at or above laboratory detection limits (ND). PAHs were detected at individual concentrations up to 24.3 mg/kg."*

EnviroReporter.com was not aware of this report or these results. Neither, we suppose, was the city of Simi Valley or its residents. We note that the **benzene in this tarry material found in Runkle Canyon is nearly 55 times its PRG for residential soil, the limit of which is 0.62 mg/kg and that, according to the EPA's 2004 PRG list for contaminants, exceeds the chronic, 100% chance of contracting a cancer from this substance which is 33 k/g/mg.**

P. 21/150 : Under "Conclusions and Recommendations": *The Rocketdyne facility located to the east of the southern 715 acre parcel is reportedly the origin of groundwater plumes of degraded groundwater, containing perchlorate and TCE, that have migrated offsite to the east and southeast of the Runkle Site. Based on the reported magnitude and direction of degraded groundwater originating from the Rocketdyne facility and the results of soil, surface water, and groundwater samples collected from within Runkle Canyon it does not appear that the historic sources originating from the Rocketdyne facility are adversely affecting the Runkle property. Further evaluation of chemicals of concern potentially originating from the Rocketdyne facility appears unwarranted at this time."*

This conclusion is questionable. TCE, which has a plume of subsurface contamination in Area IV above the 11-acre drainage into Runkle Canyon, has been detected in Runkle Canyon groundwater. Perchlorate has been detected in the site's groundwater at levels ranging up to double to 11 times what was found under adjacent Ahmanson Ranch and 55 times the Public Health Goal. The surface water has been impacted by high levels of arsenic, chromium, nickel, vanadium, barium, cadmium and lead. The surface soil has high levels of some of these heavy metals as well as strontium-90.

This Geocon report says it examined other reports to help form the conclusion that these substances aren't coming from Rocketdyne and don't need to be further evaluated. Apparently, Geocon did not read these reports as carefully as *EnviroReporter.com* has or it would have noted that in the May 8, 2003 Miller Brooks Phase I & II report performed for GreenPark Runkle, it says regarding perchlorate: "The source is thought to be the SSFL facility."

P. 21/150: *"Previous health risk assessments conducted by the property owner have concluded that the reported concentrations at the Site pose a low radiological risk to residents, visitors, and neighbors. In all cases the risk was calculated to be less than the target risk level of one in one million (1 X 10-6)."*

As previously noted, the CDHS calculates the risk from strontium-90 in Runkle Canyon soil and dust to be nearly five in a million.

But if the "assessments conducted by the property owner" are to be the only source of information, that would include the **Foster Wheeler reports 58 soil samples which averaged 1.39 pCi/g, or six times the EPA's preliminary remediation goal and nearly 46 times above the typical EPA background level for Sr-90 in the area. The hottest sampling spot, and the one closest to Rocketdyne's Santa Susana Field**

Laboratory, measured 12.34 pCi/g, which is over 54 times the EPA's PRG and 411 times the normal background for the radionuclide.

P. 21/150: *"Based on the odor, appearance, and the analytical laboratory results, the tar appears to be a petroleum-based substance; most likely "asphalt" or "asphalt cement", a heavy petroleum product containing compounds with as many as 150 carbon atoms resulting from distillation of crude oil. Because the TPH extended range analysis is terminated at compounds containing approximately 40 carbon atoms, the reported analysis accounts for only 10% of the total mass of the sample.*

The asphalt may have been used at the former aggregate mining operation to create asphaltic concrete for surfacing haul roads. The asphalt exposed in the stream channel is of limited lateral and vertical extent, though it may be possible that other deposits could exist elsewhere within the undocumented fill in the canyon. Geocon estimates that the volume of asphalt is approximately 12 cubic yards or less. Based on the analyses performed and the quantity of material, it is our opinion that this material does not represent an REC. In its present condition, the asphalt would not be suitable for use in fill and should be removed from the site and disposed of at a recycling facility or possibly at a Class III landfill if in solid form."

EnviroReporter.com recommends that the petroleum-based substance, with high benzene content, be analyzed for the approximately 110 other carbon atoms, or 90% of the total mass of the sample that remains unaccounted for. We also concur with Geocon that this material be removed from the site and disposed of properly after it is correctly analyzed in DTSC's lab and characterized in situ to determine its lateral and vertical extent.

P. 77/150: **Test results of Polynuclear Aromatic Hydrocarbons include a result of 24.3 mg/kg for benzo(a)antracene which is 39.19 times its PRG of 0.62 mg/kg.**
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August 1, 2005: Runkle Canyon_Dade Moeller_Supplemental Soil Sampling for Strontium-90_82005

The results of this testing were analyzed in the January 19, 2006 article for *Los Angeles ValleyBeat* entitled "Hot Property." As the article notes:

The retested locations were all radically lower in Sr-90 than in the previous tests conducted by GreenPark Runkle. In one spot tested, the state lab's results were 490 times lower for Sr-90 than when it was tested in a 1999 survey. Oddly, the CDHS results for Sr-90 were from two-to-19 times less than the exact same split samples analyzed by Dade Moeller.
[snip]*Each one of Dade Moeller's readings is above Sr-90's natural background at Runkle Canyon and even though that lab's reading for the previously known hottest spot on the property is lower by nearly 30 times, it is still over eight times the background and nearly twice the EPA's preliminary remediation goal for Sr-90.*

EnviroReporter.com maintains that this Dade Moeller report not only was based on too few samples, but that it is highly inaccurate as well.

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July 22, 2005: Runkle Canyon_Miller Brooks_June 2005 Groundwater Sampling Activites_72205

EnviroReporter.com has no comments on this sampling other than to note that they were conducted at the direction of the Regional Water Quality Control Board, Los Angeles (LARWQCB), to test for perchlorate and, interestingly, NDMA, neither of which was detected according to the report even though a reading of 330 µ/l was detected.

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June 9, 2005: Runkle Canyon_Miller Brooks_Converse Soil & Groundwater Sampling Oversight_60905

EnviroReporter.com has no comments on this sampling.

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April 1, 2005: Runkle Canyon_Dade Moeller_Sr-90 Radiological Health Risks Assessment- 042005

On page 14 of this 32-page PDF states "[The] risk to a typical Runkle Canyon resident would be much less than the target 1 x 10(-6) risk level and even less than 1 x 10(-7)." On page 15, Dade Moeller claims the result for residents who do not ingest soil or eat homegrown produce would be "closer to 2 x 10(-8). On page 16, the report states that an "open space" user's "risk would be less than 1 x 10(-8)." On page 17, Dade Moeller asserts that for neighbors exposed to the dust of Runkle Canyon construction "would be 3.1 x 10(-10).

These estimations, not fully calculated in Dade Moeller's report, do not jive with CDHS' response to questions posed by the Radiation Rangers to the department. In an April 10, 2007 letter, CDHS states "[T]his soil concentration equates to approximately 5E-6 (5 in a million] cancer risk for future site residents using the EPA PRG…"

This means that, despite the unexplained math, Dade Moeller underestimates the cancer risk that CDHS calculates by factors ranging from 50 to 16,129 times. *EnviroReporter.com* maintains that Dade Moeller's estimations are highly inaccurate and should not be used to estimate cancer risks for residents, open space users or neighbors exposed to construction dust of Runkle Canyon's proposed development.

++
February 9, 2005: Runkle Canyon_Miller Brooks_Supplemental Rpt for Groundwater Sampling_20905

This report notes that chloroform was detected in two samples at 1.1 and 1.2 micrograms per liter (µ/l). *EnviroReporter.com* is not prepared at this time to determine the relevance of these results.

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July 29, 2004: Runkle Canyon_Miller Brooks_Supplemental Site Assessment Rpt Groundwater_72904

On page 3 of this 93-page PDF, the report states: *The samples collected from Well MW-I (MW-1 and DUP- 1 were reported to contain concentrations of NDMA at 3.2 nanograms per liter ng/L and 3.5 ng/L respectively. The data assessment stated that the concentrations of NDMA reported in the samples collected from Well MW-I should be considered suspect based on method blank contamination and internal standard failures.*

EnviroReporter.com observes that this lab, and other labs used by the developers, have repeatedly discounted positive hits for contaminants as laboratory error which we find highly questionable.

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March 31, 2004: Runkle Canyon_Miller Brooks_Source Evaluation Report_33104

Page 2 of this 50-page PDF state that the "SSFL facility is located at a higher topographic elevation than the [Runkle Canyon] Property; however, a steep ridgeline separates the facility from the Property (EDR, 2003)."

This is highly misleading. While indeed a steep ridgeline separates *some* of the lab from Runkle Canyon, a well-established 11-acre drainage leads off of Area IV of Rocketdyne leading directly down into Runkle Canyon.

This report does contain an excellent historical summary for Runkle Canyon stretching all the way back to the time of the Chumash.

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March 31, 2004: Runkle Canyon_Miller Brooks_Groundwater Investigation Workplan_33104

On page 3 of this 26 page PDF, it states: *No concentrations of perchlorate were detected in any of the water samples analyzed. Perchlorate was only detected in two groundwater/silt samples collected from Borings HS-25 and HS-26 samples HS-25-56 and HS-26-37. The concentrations detected were at 0.06 milligrams per kilogram (mg/kg) and 0.05 mg/kg respectively These levels are below the EPA's Preliminary Remediation Goals for perchlorate in residential soil (7.8 mg/kg USEPA 2001/2002).*

This is highly misleading and deceptive. **The perchlorate was found in the Runkle Canyon groundwater of the groundwater/silt samples therefore to use PRGs for**

residential soil is not appropriate. Water standards show that the 0.06 mg/kg, or 60 ppb, exceeds the Public Health Goal in tap water by a factor of ten times.

++
February 26, 2004: Runkle Canyon_RWQCB_Request for Historical and Current Site Information_22604

Miller Brooks' attempt to characterize the perchlorate in Runkle Canyon groundwater as a 'soil' event warranting the use of soil standards is disingenuous and suspicious considering what the RWQCB says on page 1 of this 4 page PDF: *Information obtained by the Regional Board indicates that activities with the potential to release Perchlorate to soil and groundwater may have occurred on your property.*
[snip]
The Regional Board believes that it is important to accurately know the distribution of Perchlorate in the vicinity of your site Therefore we are requiring that you install properly designed and constructed shallow groundwater monitoring wells at the two locations where Perchlorate was reported in groundwater/silt samples The samples must be analyzed by laboratory utilizing rigorous QA/QC protocols.

Based on the persistent and mobile nature of Perchlorate soil conditions the depth to groundwater the suspected release of hazardous materials at the site may have contaminated soil and groundwater Pursuant to section 13267 of the California Water Code you are hereby directed to submit historical and current site information to be used to determine specific sources of the groundwater pollution detected at your site and to document your efforts in technical reports.

EnviroReporter.com finds that Miller Brooks' attempt to characterize the perchlorate as existing in soil/silt versus groundwater not only is false, but it thwarts the will of the RWQCB. Subsequently, however, the RWQCB seems complicit in what could be accurately characterized as a charade on the part of the developer's lab.

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November 5, 2003: Runkle Canyon_Miller Brooks_DOGGR Files Review_110503

EnviroReporter.com has no comment on this report.

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September, 17, 2003: Runkle Canyon_Miller Brooks_Site Investigation of Southern 715 Acre Parcel_91703

P. 2/63: *No detectable concentrations of strontium-90 were found in surface soil and shallow soil samples at the Site or in the offsite background samples Based on the results of this and previous investigations strontium-90 poses no residential health risk at the Site.*

Miller Brooks took these soil samples and sent them to Casper, Wyoming-based Energy Laboratories. That lab tested the samples employing techniques that only had detection sensitivity of 2.0 to 10 pCi/g, or nine to 43 times too insensitive to even ascertain the EPA's preliminary remediation goal for Sr-90.

P. 2/63: *Two water samples were collected at the Site and analyzed for tritium. Concentrations of tritium detected in water at the Site are below the EPA standard for drinking water and are within normal background concentrations. The levels of tritium detected in water at the Site are most likely associated with recent recharge of groundwater from rainfall.*

EnviroReporter.com disagrees with this speculation that the tritium comes from rainfall recharge, whatever that means. Rocketdyne's Area IV, where the lab nuclear work was done and which has an 11-acre drainage into Runkle Canyon, has a major tritium groundwater plume. Indeed, the Jewish day camp Brandeis-Bardin sued Boeing over tritium contamination on its land in the 1990s and won a confidential settlement that included Boeing buying a large tract of land contaminated by tritium from Brandeis-Bardin. That land is now labeled "undeveloped land" on maps of SSFL on the northwestern and northern borders of Rocketdyne. Activists assert that when Boeing officials claim that no tritium contamination has migrated "offsite," the officials are being disingenuous because they purchased that offsite land as part of the lawsuit settlement.

EnviroReporter.com does not disagree with the activists' analysis. Considering this obvious source of tritium contamination, we disagree strongly with the relatively benign-sounding explanation for tritium detections that Miller Brooks utilizes here.

P. 4/63: *Based on an additional statistical analysis of the 17 samples (Samples SS-1 through SS-17; Figure two) duplicate samples. Samples SS-18 and SS-19 collected on the Site the average strontium-90 concentration was calculated at 0.88 pCi/g and the 95 percent upper confidence limit of the mean was calculated at 1.4 pCi/g (Table 1). Therefore, on average, the strontium-90 concentrations detected in soil are lower than the acceptable standard for strontium-90 calculated by Foster Wheeler (1.23 pCi/g). Although the 95 percent upper confidence limit is higher than the 1.23 pCi/g the difference is not statistically significant. The incremental cancer risk associated with strontium-90 concentration of 1.4 pCi/g is 0.55 in a million which is lower than the incremental cancer risk of in million that is considered acceptable by California health and environmental protection regulatory agencies Robles 2003 and Foster Wheeler 1999.*

Analysis of these 41 documents provided to DTSC by KB Home reveals a disturbing pattern: the propensity to make generalizations not based on fact and to assert risk-based conclusions without mathematically proving them. The preceding section is no exception to this pattern.

"Therefore, on average, the strontium-90 concentrations detected in soil are lower than the acceptable standard for strontium-90 calculated by Foster Wheeler (1.23 pCi/g)," is a

statement not based on anything *EnviroReporter.com* can find in regulatory guidance or standard scientific practice. The EPA's Preliminary Remediation Goal (PRG) for strontium-90 is 0.230 pCi/g which is exceeded by this Foster Wheeler calculated result by a factor of 5.35 times, or a cancer risk of 5.35 in a million, far exceeding the developers' labs oft-stated goals of less than one in a million.

Likewise this unsubstantiated claim: "The incremental cancer risk associated with strontium-90 concentration of 1.4 pCi/g is 0.55 in million…" This result actually calculates to be 6.09 times the EPA's PRG which is exceeds the 0.55 in a million figure by a factor of over 11 which is quite a mistake in our analysis of the data.

P. 6/63: *Environmental investigations conducted at neighboring properties showed that strontium-90 was present in soil at concentrations that were deemed to be either within background concentrations or at levels considered to pose no significant health risk (Robles 2003).*

This is incorrect. Elevated strontium-90 soil readings above background concentrations were found at the adjacent Brandeis-Bardin Institute in two dozen samples according Boeing's 1995 McLaren/Hart report "Additional Soil and Water Sampling – The Brandeis-Bardin Institute and Santa Monica Mountains Conservancy," which is cited in this report.

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September, 17, 2003: Runkle Canyon_Miller Brooks_Site Investigation of Western 350 Acre Parcel_91703

P. 3/50 pages of the PDF: *The strontium-90 concentration in Sample SS- 16 (0.686 pCi/g) was found not to exceed exposure limit considered to be protective of human health (1.23 pCi/g; Foster Wheeler, 1999 and Harding ESE, 2000).*

Again, it seems that Miller Brooks either ignores or does not understand the EPA's concept of Preliminary Remediation Goals which are limits that correspond to a cancer risk of one in a million. The **0.686 pCi/g reading is nearly three times the PRG for strontium-90 and is nearly 23 times background for the area**. Likewise, the reference to Foster Wheeler's 1.23 pCi/g reading being "protective of human health" is also false.

Our comments, above, regarding Miller Brooks assessment of the 750-acre parcel apply to this report as well.

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September 17, 2003: Runkle Canyon_Miller Brooks_Site Investigation Report 550 Acre Parce_91703

P. 1 of this 102 page PDF: *The average strontium-90 concentration in surface soil is about 0.1 pico Curie per gram.*

This concentration is not applicable to the Simi Valley area which the EPA estimated in 1995 was 0.052 pCi/g and later determined by *EnviroReporter.com* to be actually 0.030 pCi/g utilizing averages for the area derived from EPA results.

EnviroReporter.com readers have asked us why the area's background measurements for strontium-90 are about a third of the average nationwide, especially considering the proximity to Rocketdyne, site of at least two partial nuclear meltdowns. Our reply is that most strontium-90 fallout from atomic and hydrogen bomb above ground testing in Nevada made its way eastward on prevailing winds thereby not impacting areas to the west of it as much. Simi Valley and Runkle Canyon are substantially west of the now-inoperable Nevada Test Site.

Our comments, above, regarding Miller Brooks assessment of the 750-acre parcel apply to this report as well.

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September, 17, 2003: Runkle Canyon_Miller Brooks_Surface Water&Groundwater Sampling Rpt_91703

P. 6 of this 146 page PDF: *In addition soil samples surface water samples from springs and seeps and National Pollutant Discharge Elimination System (NPDES) discharge samples collected by the Department of Toxic Substances Control (DTSC) and The Boeing Company (Boeing) at or near the Runkle Canyon Property as part of the Rocketdyne Propulsion and Power Santa Susana Field Laboratory (SSFL) sampling programs show no detectable concentrations of perchlorate. Perchlorate at levels ranging between 130 to 156 times less than the Environmental Protection Agency (EPA) Preliminary Remediation Goals (PRG) for perchlorate in residential soil 7.8 milligrams per kilogram was detected in two groundwater/silt samples collected at depths greater than 35 feet below the surface of the Property Based on the depth of the two silt samples impacted with perchlorate the extremely low levels of perchlorate detected in those samples the non-detectable levels found in all other samples and the lack of exposure pathways there is no indication that activities at the Property surface will be impacted by perchlorate.*

Miller Brooks repeats the same misleading and deceptive information that it has in other reports regarding this sampling. The perchlorate was found in the groundwater of the groundwater/silt samples therefore to use PRGs for residential soil is not appropriate. Water standards show that the 0.06 mg/kg, or 60 ppb, exceeds the Public Health Goal in tap water by a factor of ten times.

P. 11/146: Miller Brooks testing of surface water consists solely of examining the leachate of asphaltic material found in the middle of the road. No analysis of the actual surface water in the intermittent stream or vernal pools occurred and yet, in spite of the name of this report, the lab asserts, falsely as later found out by the Radiation Rangers, that the surface water has no heavy metal contamination.

P. 53/146: Arsenic soil reading of 3.3 mg/kg exceeds its soil PRG of 0.062 mg/kg by a factor of 53.23 times.

Our comments, above, regarding Miller Brooks assessment of the 750-acre parcel apply to this report as well.

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May 21, 2003: Runkle Canyon_Miller Brooks_Asphalitc Material & Surface Water Sampling_52103

P. 7 out of this 43 page document: As we reported in the June 21, 2007 *Los Angeles CityBeat* cover story "The Radiation Rangers," Miller Brooks did not test the surface water for heavy metals:

The city soon informed the Stop Runkledyne group that KB Homes had reminded them that they had already tested the surface water and had submitted that information in a comprehensive 42 page report that was already in the development's EIR. That 2003 report by Huntington Beach-based Miller Brooks Environmental Inc. tested one asphalt sample and a nearby surface water sample.

In the body of the report, Miller Brooks writes that Title 22 metals were "below state and federal regulatory limits (see Table 1)." Indeed, Table 1 actually says that the Title 22 metals in the surface water sample were "not analyzed." Oddly, the Title 22 metals were tested in the asphalt but not in the water.

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May 8, 2003: Runkle Canyon_Miller Brooks_Phase I & II_Pgs 1-120_50803

P. 23 of the 120 page document: *Perchlorate was detected in groundwater/silt samples collected from 56 feet and 37 feet bgs respectively in Borings HS-25 and HS-26 at concentrations of 0.006 mg/kg and 0.05 mg/kg respectively The perchlorate was detected in the silt/groundwater samples at concentrations below the EPA PRG for residential soil (7.8 mg/kg). Therefore the perchlorate does not pose threat to human heath [sic].*

As *EnviroReporter.com* has commented on this sampling repeatedly, using a soil standard for this result is incorrect. A water standard is correct. Also, the figure of 0.006 is a typo – the true measurement is 0.06 parts per million or 60 parts per billion for water.

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May 8, 2003: Runkle Canyon_Miller Brooks_Phase I & II_Pgs 121-205_50803

EnviroReporter.com has no comments on this part of this Miller Brooks report.

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May 8, 2003: Runkle Canyon_Miller Brooks_Phase I & II_Pgs 206-362_50803

EnviroReporter.com has no comments on this part of this Miller Brooks report.

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November 3, 2000: Runkle Canyon_Harding_Limited Soil Sampling_Pages 172 to 342_110300-2

EnviroReporter.com has no comments on the data section of this part of Harding report that aren't already included in our comments on the first part of the report below.

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November 3, 2000: Runkle Canyon_Harding_Limited Soil Sampling_Pages 1 to 171_110300

P. 9 of this 171 page PDF: *Review of the applicable radionuclides results (Table 1) indicated that the concentrations of tritium in all of the samples collected were below the minimum detectable activity (MDA). In addition, the concentrations of cesium -137 in all of the samples except S-I were also below the MDA The cesium-137 concentration in sample SS-1 at 0.09 pCi/g just exceeded the MDA of 0.077 pCi/g In terms of strontium -90 results, six of the seventeen original samples submitted exceeded the MDA in concentrations that ranged from 4.756 pCi/g in SS-6 to 0.686 pCi/g in SS-16.*

The cesium-137 exceeds the EPA's Preliminary Remediation Goal for an unrestricted residential setting. **The 0.09 pCi/g cesium-137 result is 151% of the PRG** of 0.0597 pCi/g.

The strontium-90 ex exceeds the EPA's Preliminary Remediation Goal for an unrestricted residential setting. **The 0.686 pCi/g strontium-90 result is 297% of the PRG** of 0.231 pCi/g.

The 4.756 pCi/g strontium-90 result is 2,059% of the PRG for Sr-90 or **over 20 times the strontium-90 PRG.**

The report goes on to compare this numbers to the Department of Energy's "dose-based" figures for the radionuclides, which is not how the Environmental Protection Agency calculates radiation danger. The EPA uses a risk-based numerical approach embodied by the use of Preliminary Remediation Goals.

The report goes on to show that the highest numbers were the ones closest to Rocketdyne, which *EnviroReporter.com* maintains that it indicates that the radionuclide may have come from the lab, and that "further systematic random soil sampling should be performed."

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October 19, 2000: Runkle Canyon_Miller Brooks_Phase I & Soil Sampling_Pgs. 98-307_101900

EnviroReporter.com's comments on this report are following in the Miller Brooks October 19, Pages 1-97 section.

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October 19, 2000: Runkle Canyon_Miller Brooks_Phase I & Soil Smapling_Pgs 1-97_101900

p. 9 out of 97 page PDF: *The primary contaminants of concern at the SSFL Facility are TCE and cis-1,2-dichloroethylene (1,2-DCE). However, other contaminants detected in groundwater beneath the SSFL facility during 1999 and 2000 include trans-l,2- DCE acetone, 1,4-dioxane, methylene chloride, nitrosodimethylamine, tetrachioroethylene (PCE), toluene, benzene, carbon disulfide, Freon 11, Freon 113, chloroform, perchlorate, total petroleum hydrocarbons (TPH) as gasoline, radiochemicals, vinyl chloride, nickel, and selenium (Haley Aldrich Inc. 2000).*

It is noteworthy that many of these contaminants are found in adjacent and down-elevation Runkle Canyon as well.

P. 13/97: *During the site visit on the Subject property on September 2000 soil removal activities were being conducted on the western portion of the SSFL Facility. The soil in the removal area was reportedly impacted with PCBs, mercury and dioxin (Figure 2). In phone conversation with Mr. Art Lenox from Boeing Environmental Group, it was stated that approximately 10,000 tons of soil had been removed from the site over the past two to three months Concentrations of PCBs mercury and dioxin in the soil exceeded the Preliminary Remediation Goals (PRGs) for residential soil. This information was the basis for the soil sampling plan conducted by MBE.*

EnviroReporter.com was never aware that such a large amount of contaminated dirt was removed from Area IV from this area which has an 11-acre drainage into Runkle Canyon according to Boeing maps.

P. 15/97: On September 13, 2000, two MBE personell surveyed the Rocketdyne/Runkle Canyon border area with a pancake Geiger-Mueller detector, passing it over the soil within 2 o 3 centimeters. They concluded there was no obvious sign of radiation above background. *EnviroReporter.com* contends that this is not a satisfactory way to conduct a radiation survey as it does not have the ability to detect the various radionuclides that may be impacting the area. The report's finding of "no gross contamination" cannot be supported by such a limited survey.

Five soil samples were also collected the same day and a week later. *EnviroReporter.com* contends that a definitive soil analysis can be ascertained based upon this limited a soil sample performed without adherence to proper EPA protocol.

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October 12, 2000: Runkle Canyon_Miller Brooks_Radiation Survey and Soil Sampling_101200

EnviroReporter.com's comments on this report are following in the Miller Brooks October 19, Pages 1-97 section.

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May 16, 2000: Runkle Canyon_Foster Wheeler_Phase I for West Parcel_51600

EnviroReporter.com has no comments regarding this report at this time.

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October 1, 1999: Runkle Canyon_Foster Wheele_Invest._Vol I_Pgs 1-108_101999

This report was commented on in the print, online, and online-annotated version of the *Los Angeles CityBeat* cover story "Neighborhood Threat" by Michael Collins, March 10, 2005.

The following comments are from the newpaper article and serve to address the report in its entirety, **including the eight sections below.**

In its October 25, 1999 report, Foster Wheeler states that "the exposure limit chosen was 15 mrem/year (millirems per year) above natural background, which is a value already proposed by the EPA… 15 mrem/year is generally considered to be an acceptable end point, which is considered to be protective of human health by the USEPA."

This 'dose-based' number measured in millirem is not the way the EPA measures a radionuclide's toxicity. The agency calculates the presumably safe levels of radionuclides by using "preliminary remediation goals," or PRGs. The Foster Wheeler statement that the EPA proposed this is also apparently inaccurate.

"An EPA limit was never formally proposed and the informal suggestion was withdrawn due to, basically, Department of Energy and Nuclear Regulatory Commission pressure," says Stuart Walker, an EPA official who specializes in Superfund radiation issues. "The PRG levels are kind of the generic concentrations for Superfund cleanup sites although when you start talking about soil, we use a risk range for cancer of one-in-1,000,000 to one-in-10,000 as the risk limit range."

In other words, the EPA calculates a fatal cancer risk for each substance so that it would cause no more than one death per every 10,000 people exposed to that radionuclide. But the ultimate goal is no more than one death per million people exposed.

The PRG for strontium-90, and its accompanying decay product, yttrium-90, is 0.231 picocuries per gram (pCi/g). This is a measure of how much the substance decays, shooting out ions that cause cancer.

Foster Wheeler's 58 soil samples averaged 1.39 pCi/g, or six times the EPA's preliminary remediation goal and nearly 27 times above the typical EPA background

level for Sr-90 in the area. The hottest sampling spot, and the one closest to the Rocketdyne's Santa Susana Field Laboratory, measured 12.34 pCi/g, which is over 54 times the EPA's PRG and 237 times the normal background for the radionuclide. Regardless, the GreenPark subcontractor gave a hardy thumbs-up to the results. "In perspective, the concentrations of strontium-90... were found to be insignificant," concluded the Foster Wheeler report.
"That's definitely within the risk range," says Walker, "unless something weird is going on with the site that would kick it up but, like I said, those are conservative numbers."

"(Foster Wheeler) found even higher rad levels in the second set of tests than the first and had to massage them through really flaky means, but the numbers don't lie," says longtime Rocketdyne critic, Dan Hirsch of the Santa Cruz-based Committee to Bridge the Gap.

This weird science made its way into the now-approved EIR. "This assessment found that radiation levels were within normal background levels," it reads. "Tritium and strontium-90 were not detected in any of the soil and groundwater samples at levels above normal background levels or at levels considered to pose a health risk."

"It is troubling that a project would be approved based on the assertion that no soil samples found strontium-90 … at any level deemed to be a health concern, when virtually all of the several dozen samples exceeded background and EPA's preliminary remediation goals for radioactive contamination," says Hirsch.

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October 1, 1999: Runkle Canyon_Foster Wheele_Invest._Vol I_Pgs 109-217_101999

See comments above in October 1, 1999: "Runkle Canyon_Foster Wheele_Invest._Vol I_Pgs 1-108_101999."

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October 1, 1999: Runkle Canyon_Foster Wheeler_Invest._Vol I_Pgs 218-420_101999

See comments above in October 1, 1999: "Runkle Canyon_Foster Wheele_Invest._Vol I_Pgs 1-108_101999."

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October 1, 1999: Runkle Canyon_Foster Wheeler_Invest_Vol I_Pgs 421-641_101999

See comments above in October 1, 1999: "Runkle Canyon_Foster Wheele_Invest._Vol I_Pgs 1-108_101999."

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October 1, 1999: Runkle Canyon_Foster Wheeler_Invest._Vol II_Pt 1_Pgs 1-254_101999

See comments above in October 1, 1999: “Runkle Canyon_Foster Wheele_Invest._Vol I_Pgs 1-108_101999.”

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October 1, 1999: Runkle Canyon_Foster Wheeler_Invest._Vol II_Pt 1_Pgs 255-507_101999 -

See comments above in October 1, 1999: “Runkle Canyon_Foster Wheele_Invest._Vol I_Pgs 1-108_101999.”

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October 1, 1999: Runkle Canyon_Foster Wheeler_Invest._Vol II_Pt 2_Pgs 1-247_101999

See comments above in October 1, 1999: “Runkle Canyon_Foster Wheele_Invest._Vol I_Pgs 1-108_101999.”

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October 1, 1999: Runkle Canyon_Foster Wheeler_Invest._Vol II_Pt 2_Pgs 248-493_101999 -

See comments above in October 1, 1999: “Runkle Canyon_Foster Wheele_Invest._Vol I_Pgs 1-108_101999.”

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October 1, 1999: Runkle Canyon_Foster Wheeler_Invest._Vol II_Pt 2_Pgs 494-735_101999

See comments above in October 1, 1999: “Runkle Canyon_Foster Wheele_Invest._Vol I_Pgs 1-108_101999.”

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August 2, 1999: Runkle Canyon_Foster Wheeler_Invest._Vol I_Pt. 2_Pgs 1-250_80299 -

EnviroReporter.com has no comments regarding this report at this time.

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August 2, 1999: Runkle Canyon_Foster Wheeler_Invest._Vol I_Pt 2_Pgs 251-499_80299 -

EnviroReporter.com has no comments regarding this report at this time.

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February 5, 1999: Runkle Canyon_QST_Results of Preliminary Soil Sampling_020599 -

This report was commented on in the print, online, and online-annotated version of the *Los Angeles CityBeat* cover story "Neighborhood Threat" by Michael Collins, March 10, 2005. Here is the excerpt related to this report:

In December 1998, when GreenPark began its environmental investigation of the property, the developer hired Phoenix-based QST Environmental to do preliminary soil sampling of the canyon to see if the former Rocketdyne lab "had impacted on-site soils, based on surface run-off carrying radionuclides to the site." The results "indicated the presence of Strontium in all samples collected… that exceeded the EPA average local background concentration." Indeed, the four soil samples contained up to 17 times the amount of the radionuclide that the EPA says is naturally occurring in the area. "Based on the analytical results of the soil samples, it would appear that there may have been some impact of radionuclides to the site from the Rocketdyne facility," the report said.
[snip]
When GreenPark subcontractor QST Environmental concluded the developer's preliminary soil sampling of Runkle Canyon in February 1999, it apparently had planned to do more work. "QST is currently preparing a scope of work to conduct the next phase of the investigation at Runkle Ranch," QST wrote at the conclusion of its report. But it was not to be.

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August 27, 1998: Runkle Canyon_Ramco_Preliminary Site Assessment_82798 - "PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT REPORT FOR PROPERTY TITLE TRANSFER" for LARRY RASMUSSEN et al SPIRIT HOLDING INC. 23120 LYONS AVENUE 5436, NEWHALL CALIFORNIA 91321
performed by REGULATORY AFFAIRS MANAGEMENT COMPANY LLC
dba RAMCO Environmental

P. 3/65: "The United States Geological Survey (USGS) delineated Blue-Line surface water courses traversing the property south to north.

P. 5/65: Rasmussen is described as "prospective buyer."

P. 5/65: "RAMCOs assessment did not include investigation for asbestos containing materials lead in ground or surface water or paint radon PCB polychlorinated biphenyls nor subsurface conditions of groundwater or soil specific to the Site."

P. 6/65: "It should be noted that typical Preliminary Environmental Site Assessment during the time of this assessment did exclude subsurface exploration or chemical screening of soil and groundwater beneath subject site These data would accurately present evidence of contamination or impairment. Therefore in any study excluding sampling and analysis no statement of scientific certainty could be made or inferred regarding latent subsurface conditions that may have come from either on-Site or off-Site sources."

P. 13/65: “The file review produced letter dated Sept 10 1984 from the County of Ventura stating that S.P Milling Co. was in violation of letting illegal dumping to occur on the property and that the dumping must be corrected within thirty days This suggests that possible regulated and/or hazardous materials were dumped on Site.”

P. 15/65: “The unsaturated and saturated soil of the area was highly permeable and porous however the upper most saturated zone was estimated to be greater than 30 feet below ground surface. These conditions would enhance chemical migration. Based upon the anticipated flow path of groundwater and no recorded up gradient site of concern nearby contaminant migration from off site sources was considered very low potential threat.”

P. 16/65: “The white fine grain material deposited by the leaching water of the aggregate stockpiles in the material processing area would suggest potential for regulated if not hazardous materials. The fact of equipment operations in the former material processing area has now been established this also presents the potential for hazardous materials releases. The presence of these materials presents potential for environmental risk to Site dwellers soil and possibly surface water.”