

Attachment – CBG Detailed Comments on Parcel G Retesting Work Plan

p. iii only references Navy reviews of Tetra Tech falsification, not EPA's. EPA found twice as many unreliable measurements as the Navy, and made numerous criticisms of the Navy reviews. The additional survey units identified by USEPA/DTSC/CDPH as needing retesting are excluded from the main retesting plan, and only a very superficial review of those survey units will be conducted, as Phase 2. This is quite inappropriate. And many of the other EPA criticisms of the Navy review are ignored. It is remarkable that the EPA/DTSC/CDPH review is essentially ignored.

“Additional reference background areas will also be identified to confirm, or update as necessary, estimates of naturally occurring and man-made background levels for ROCs not attributed to Naval operations at HPNS.” Note definition of background. “Not attributed” and focused on Naval operations at HPNS. Navy bringing in contaminated fill doesn't count, for example. This seems clearly an attempt to further inflate background.

p. iv cites ANL 2011 for claim radium measurements were biased high. The document can't be found—not on Navy website, ENVIROSTOR, or through a Google Search. It is inappropriate to not affirmatively make available a document as critical to this fundamental—and absurd--claim that the site is too clean. Note the first bullet is based on what are called accusations that “may” result in some contamination not cleaned up; next bullets are assertions that in fact too much was cleaned up. Astonishing—it asserts 80% of soil declared contaminated wasn't. No basis given. key -- says an estimated 80% of what was cleaned up didn't need to be, and says this was known since 2011 by “stakeholders”—who are unnamed. What stakeholders?

Conceptual Site Model is supposedly based on the HRA; but no, it isn't (nothing about radium measurements, falsification, or background in HRA), and HRA exempts 90% of the property from consideration.

It is very strange that the plan says they will monitor trench units but are silent on fill units. It refers to 63 trench units, but there are also 107 fill units.

phase I involves 21 of 63 former trench units, and 14 of 28 surface soil units from a former building site. Navy report had recommended retesting only 20 of trench units so it seems their Phase I is basically doing what they wanted to any way, and Phase II may touch the other units (except fill units) but not really retesting them.

Troubling that the plan targeted TUs and SUs for main retesting, based on Navy's estimate of which were fabricated; but EPA, DTSC, and CDPH said virtually all were. Plan essentially thumbs its nose at the Navy's regulators.

Excavated soil will be laid out in rad yards and gamma scanned in Phase I, which cannot see any beta or alpha radionuclides and they admit cannot see any gamma radionuclides of concern at cleanup levels except radium (admitting that it can't see cesium-137 at the cleanup levels).

p v Walk over or drive over gamma scans of surface soil units Phase I, which as indicated above, are blind to virtually all radionuclides of concern at the cleanup levels.

Phase II is deeply troubling--for 2/3 of trench units they will just do borings and do a gamma scan of the core.

Strange that they are only doing alpha-beta scans of buildings; no gamma.

p vi key comparing to the old, wrong release criteria; if meet those, everything OK. Yet the building release criteria are based on the 1974 Reg. Guide 1.86 from the now-defunct AEC, which violates EPA guidance saying one is supposed to use instead EPA's current Building PRG calculator for release criteria for buildings, and the soil release criteria are from 1991 EPA PRGs instead of the current EPA PRGs. In both cases, using the required EPA PRG calculators are far more more protective. There is no excuse to use vastly outdated and nonprotective release criteria.

(Note, there is no reference to using the sum of the fractions, no adding in other radionuclides or chemicals as is required under CERCLA.)

“Individual samples reporting 226Ra gamma spectroscopy concentrations greater than the RG for 226Ra will be analyzed for uranium-238 (238U) and 226Ra using comparable analytical methods. For that specific sample, the 238U result will be used as a more representative estimate of the background value for 226Ra, and the alpha spectrometry 226Ra concentration will be compared to the RG for 226Ra using the revised background value.” This is very erroneous and biased to reduce cleanup inappropriately. 238U can only be used to estimate 226Ra background if there is no possible added source of 238U beyond what occurred at the site in nature. Since More than a ton of 238U was licensed at Hunters Point, and additional uranium was associated with decontaminating ships and in fallout samples brought back from the nuclear test zones, no such assumption can be made. Using 238U as the 226Ra background is fundamentally flawed and designed once again to inflate background and improperly reduce cleanup. It shows a deep bias and lack of honesty in the Work Plan, a falsification not unlike that of Tetra Tech that this plan was supposed to correct.

Main Body of Work Plan

p. 1-1 only testing “radiologically impacted” soil and buildings, and only those tested by Tetra Tech. Much of HP will thus never be sampled. All of Parcel G is potentially impacted, from the decades of activities that could have resulted in widespread migration of contamination (e.g., sandblasting and steam-cleaning contaminated ships).

claims a phased approach was adopted pursuant to a suggestion by unnamed regulatory agencies. They should be identified—the silence is suspicious. It is not clear they wanted Phase II to be far less rigorous than Phase I, which is what the Navy is now proposing. If EPA etc didn't sign on to Phase II being less thorough than Phase I, claiming the phased approach comes from unnamed regulatory agencies is misleading at best.

They are not using all of MARRSIM, just parts they feel are “applicable” in light of the Basewide Rad Memo. Unclear what they are using and what not, and why.

Most of the actual plan will be in a Sampling and Analysis Plan, which is not included and is not subject to public review or input. This “hide the ball” approach is quite inappropriate, given the scandal that occurred in part because of failure of transparency and opportunity for full review.

key p 2-1 says purpose is to deal with allegations Tetra Tech misrepresented data—doesn’t say falsified, fabricated, etc. “and in addition” overestimated radium. The navy is changing the nature of the retesting entirely, which was to be to deal with Tetra Tech falsification. Instead it is now skewed toward asserting that there was too much cleanup, rather than too little.

fn is key claims used wrong measurement technique, and comparison with offsite lab was consistently higher for the onsite lab, but don’t show us those data, or why there isn’t a bias for the onsite lab. [note: if the radium measurements are biased high, so presumably should be the background, which would nullify it]

2-2 dredge spoils were used as fill. If true, than using measurements of fill that contained dredge spoils as background would be completely inappropriate, because Hunters Point activities (e.g., decontaminating ships in dry docks or slips) would have contaminated that material.

2-3 lists only a few Radionuclides Of Concern, ROCs, even fewer for most sites. There are on the order of 100 genuine ROCs, and artificially restricted them to a handful means that no measurements will be made for the great majority and even if there were, they would not be cleaned up because there are no remediation goals identified for them. So the Navy is declaring the great majority of Parcel G will never be tested, and for the parts that are, the great majority of radionuclides won’t be tested for or required to be cleaned up even if found.

2-4 outrageous; no pathway except for construction worker from ingestion or inhalation; only external exposure from ROCs for everyone else; and of course no garden KEY KEY KEY; will use for their risk assessment – only external exposure (through covers) are pathways considered.

astonishing under the uncertainties section: The assertion that there is a LOWER potential for contamination than previously assumed. Not a single item is identified about higher potential.

“LLRW bins were tested by the Navy’s independent waste broker at an offsite laboratory using 5-point composites, and only 3 out of 1,411 bins had results with 226 Ra above the RGs.” Where is the documentation for this, and what is a 5-point composite---averaging, which is inappropriate? How were they tested? This claim seems very flimsy, and the lack of information provided suggests that the Navy recognizes this.

Buried the data falsification as an issue.

3-1 the objective shouldn't be the 2009 ROD, but today's standards. If one is going to retest in 2018, one should do so against 2018 standards. But in fact, Navy isn't even using the 2009 ROD standards, but has changed them in the Work Plan – illegally – to make them all standards incremental above background, which isn't allowed in the ROD for anything except radium.

3-2 deeply troubling and wrong: “If any 226Ra gamma spectroscopy concentration is greater than the RG for 226Ra, then the soil sample will be analyzed for 238U and 226Ra using comparable analytical methods (e.g., alpha spectrometry for 238U and radon emanation for 226Ra). For that specific sample, the 238U alpha spectrometry result will be used as a more representative estimate of the background value for 226Ra, and the alpha spectrometry comparable result for 226Ra will be compared to the RG for 226Ra using the revised background value.” “Comparable” methods not delineated. But key—even with all the games they are playing, if a measurement exceeds the cleanup standard of 1 pCi/g above the established background, which should be the end of the matter and the area cleaned up, rather than using the established background, they will use the U-238 level in the radium sample. This makes no sense, for the reasons set forth above, that you can only use U-238 for Ra-226 background if there is no U-238 possible besides natural levels; but huge amounts of U-238 were used at Hunters Point, so the U-238 measurements won't reflect background but rather background plus contamination.

“The radiological investigation will be conducted on a targeted group of 21 of the 63 TUs associated with former sanitary sewers and storm drains and 14 of the 28 SUs3 associated with surface soil at building sites in Parcel G.” The rad investigation thus will be on only part of the suspect sites. thus violating EPA/DTSC/CDPH recommendation for retesting virtually everything. [The cursory scanning in Phase II of other survey units does not meet the requirement for full retesting of suspect sites.]

Here they will not disclose how many soil samples will be taken, systematic or biased.

3-3 Indefensible -- only 3 ROCs for TUs (trench units) and 4 for building soil Even the documents they cite (RODs and HRA) show more ROCs than these; but there could be a hundred ROCs. Nuclear weapons test debris would contain a full range of fission products, unfissioned plutonium and uranium, and activation products (including from activated corral and sand). There is simply no scientific basis for asserting there are only 3 or 4 possible radionuclides, even taking into account decay life.

They only have an investigation level for radium (1 pCi/g), not for anything else! They concede they can't see the other ROCs at the cleanup levels, or at all.

critical: footnote a-- “All RGs will be applied as concentrations above background.” Massive change to ROD, 2006 standards; violates EPA. KEY The ROD applies release criteria, with the exception of radium-226, as the full concentration measured; only radium RG is the concentration above background. You can't change the ROD through a footnote in a retesting Work Plan. They are weakening the standards through the retesting plan, which should be designed to increase public protection, not reduce it.

They will not do biased samples or do more measurements unless gamma scan goes over investigation level; but only have an investigation level for radium---NOTHING ELSE—and it is 1000 times the EPA PRG. So they will virtually never do biased soil samples, even though there could be contaminants above the release criteria.

3-4 can't see cesium at cleanup level with the gamma scan; and of course the Pu and Sr aren't given investigation levels either, because can't be seen, as they are alpha and beta emitters that the gamma scan can't see at all. Only scanning for radium and Cs, but no investigation for the latter because they can't see it at the level of concern.

They are limiting the scans to just those two, with no investigation limit even for Cs; whereas there are other gamma emitters worth watching out for.

All the stuff you are interested in from the NRDL work and the decon of ships—fission products, unburned Pu and U—they can't detect and aren't measuring for and don't have investigation levels for in terms of the scans.

Refers to investigation “levels”—but in fact only one investigation level for one radionuclide, radium, and that one they are cheating on.

“The radiological investigation design is primarily based on methods, techniques, and instrument systems in the Basewide Radiological Management Plan (TtEC, 2012) with the ultimate requirement to demonstrate compliance with the Parcel G ROD RAO (Navy, 2009).” In other words, the design is based on the work of Tetra Tech, which they are supposed to be throwing out because of falsification.

‘The RGs presented in Table 3-5 are incremental concentrations above background’ -- key, very dishonest, the remediation goals in the ROD are, with the exception of radium, not incremental concentrations above background; you can't change the ROD through a footnote in a subsequent retesting plan; and this in any case violates EPA guidance, which requires cleanup standards to be the full measured value (contamination plus background) and not the incremental amount above background.

following Tetra Tech, only 18 samples per unit. Pretty hard to find contamination with those few samples.

3-5 chose places to resample based largely on Navy 2017; silent about EPA's review that found twice as many suspect places.

6” over-excavation; unclear if it will be sampled, or only scanned once removed

Table 3-1 makes no sense, sidewall unit seems to have far larger volume than excavation volumes but footnote says equal. claims to take 2600 systematic samples from trench units. Really not that large given the area involved and the scope of the problem.

For Phase II, they are only taking 36 systematic samples per trench, compared to as many as 270 per trench for Phase I—stiffing EPA/DTSC/CDPH recommendations that almost everything should be fully sampled. Phase II, just a handful of cores, as opposed to excavating all the soil in the survey unit in question.

3-7 Phase I based solely on allegations of problems found in Navy 2017; silent on EPA/DTSC/CDPH analysis that found far more problems. .

former building areas; subject only to gamma scan; biased samples will only be taken where gamma scan over investigation levels (just radium); focused on peaks for the ROCs, which means only radium (and maybe cesium, but they admit they can't see it at levels of concern) what levels can they see—don't say; but since they don't have an investigation level, doesn't matter. In other words, they are relying on gamma scans that can basically see almost nothing that exceeds the cleanup levels.

3-8 instrumentation requirements will be based on Tetra Tech past report—again, relying on the work of the very contractor that has been discredited and whose work they are supposed to be independently redoing.

lab instruments will be set forth in Sampling Analysis Plan which the public can't see or comment on. Field instruments only set for radium, bismuth, and cesium (with the latter irrelevant because of poor minimum detectable activity, MDA)

3-10 don't give MDAs for field instruments, just formula how they will calculate; critical to know the actual MDA

calibrated annually! that doesn't seem sensible.

improper—3-14 “ provide real-time NORM background subtraction”
soil sorting system sounds questionable; conveyor belt, sorting into clean and dirty piles via high velocity and volume running by a detector; but you are still supposed to take actual soil samples, so not clear how you can do systematic lab samples if you have already piled all the soil into a “clean” pile

3-15 compositing the sample over a large volume; potentially problematic—averaging generally prohibited by EPA for residential use; easy to dilute

18 systematic samples but only 1 biased sample, from the diversion bin.

3-16 radiological screening yard; if not over RGs, declared clean and OK for reuse or to be sent off site; but RGs only for 3 or 4 ROCs, and the screening can only see for 1, radium, about which they are playing games (the throwing out of the lab measurements for Ra based on the spurious claim related to the nearby uranium peak). So almost all of the screening in the screening yard is useless; blind to almost any radionuclide at the levels that matter.

3-17 only 6 cores per TU; gamma scan of core, based on investigation level, which exists only for radium and which is already very elevated; 1 pCi above BKG, as they have been describing for all others, and inflated background. The gamma scanning of cores, rather than soil sampling, is designed to fail – it is blind to essentially anything that matters, can't see alpha, can't see beta, and can't see almost any gamma at the cleanup levels.

3-21 DOD certified lab; not EPA or state certified.

key—analysis will only be for the 3 or 4 ROCs!!!! and only 10% will be tested for Sr-90; and that using gas proportional counting (I don't see reference to chemical separation)

doesn't specify technique for Sr-90—important; easy to screw up

additionally, if sample is over RG for Cs (and they are using the wrong RG, not today's EPA PRG, and beyond that they are now using RG + [unspecified] BKG, rather than the RG alone), only then will they sample for Sr—very troubling, because there was a lot of separated Sr used at Hunters Point.

They only will analyze for Pu if Cs or Sr is above RG—again, deeply troubling. You can readily have Plutonium over release levels without Cs or Sr also being above their levels; in part because they have different Kd values affecting migration rates.

If Radium is over RG, they insist on additional analyses for NORM to try to throw out the reading. Everything is biased to throw out readings that would require cleanup; no parallel bias to double-check readings that are below RG, when that may be wrong. They are to alpha spec for U-238; “Analyses using alpha spectrometry for 238U along with an analytical method for 226Ra comparable with alpha spectrometry for 238U will be performed in accordance with the SAP.” Potential for some mischief here, not detailed.

Table 3-2 only 18 samples total per TU from fill for any Phase II analyses

pdf 49 (no page or figure #) action only taken if $226\text{Ra Concentration} > 238\text{U Concentration} + \text{RG}$ This is wrong and irresponsible, violates the ROD, outside of EPA practice. Issue isn't any longer whether Ra is greater than RG; it has to be greater than RG and U-238 concentration added together. If not, complies---dangerous. The error in assuming U-238 level is the background level for Ra-226 has been described above; that only could work if there was no U-238 besides that in background, but Hunters Point used huge amounts of U-238.

4-1 buildings to be tested against AEC Reg Guide 1.86, not EPA's Building PRG calculator, as required by EPA guidance for CERCLA sites. Reg. Guide 1.86 values are thousands of times less protective than EPA PRGs and outside even the upper limit of the EPA acceptable risk range.

Key – even with all these manipulations, if they still don't meet release criteria, they won't clean it up; they will do an analysis of risk to say it is OK not to clean it up. That violates the ROD. The remediation goals are the contamination levels that are supposed to trigger cleanup.

They claim they will follow EPA guidance, but clearly aren't—for example, they aren't using current PRGs for soil or the EPA building PRGs at all..

4-2 claim only 2-4 ROCs per building; not credible; there are a hundred potential radionuclides of concern at those buildings.

4-3, again following the Tetra Tech protocols, when all of Tetra Tech's work is suspect and they should be relying on none of it; only 18 measurements per; only one RBA—another potentially contaminated building

4-5 beta background for detectors is pretty high

Figure 4-1 amazing background reference area is in an admittedly impacted building, a few feet away from parts of the building admitted to be impacted!!

5-2, will report building measurements in cpm, instead of the units of the RGs, which are in dpm; suggests they are trying to hide things; should use the units comparable to the RGs

5-3 will compare to their claimed background, to say if “consistent with background,” then no action; but the background is feet away from the contaminated area and likely contaminated as well

5-4 extraordinary show of bias: if results exceed RGs, they will re-evaluate, see if they can question the measurement; if doesn't exceed RG, they accept it without question. All sorts of procedures to go back, not to the right portion of the soil that was elevated, and say they didn't find it again; but if results are below RGs, they accept that without re-evaluation. So the bias is heavy: question all readings above cleanup levels, because those could cost the Navy money, but do nothing to confirm readings below cleanup levels, which if wrong could place people's health at risk.

“All scan data will be compared directly to RGs or investigation levels.” But they concede scan data cannot see RGs for anything but radium and they have no investigation level except for radium because of that.

“If direct measurement or sample results exceed the RG or investigation level for a specific ROC for locations not identified by scan survey, the scan survey technique will be reviewed and investigated to determine whether the scan survey was implemented correctly and whether the scan methodology met the survey objectives.” But the Navy has admitted the gamma scan can't see almost any ROCs at RGs or investigation levels.

“The objective of investigating potential areas of elevated activity is to characterize the ROCs present and the size, or extent, of all areas of elevated activity. To accomplish this objective, a minimum of one potential area of elevated activity will be investigated in every SU.” The Navy may only investigate one elevated area per SU even if there are multiple elevated areas?

Bias is made clear – “The first step in investigating potential areas of elevated activity is to

confirm the measurement or sample results that indicated the potential area of elevated activity.” In other words if elevated, don’t go forward unless confirmed; if supposedly not elevated, no need for confirmation. This is a clear indication of the bias in the whole plan, biased towards reducing the Navy’s cleanup expenses at the cost of increasing the risk of missing contamination that should be cleaned up. “In most cases, at least one measurement or sample result documenting the lack of elevated activity will be required to support a decision to terminate the investigation of a potential area of elevated activity.” If you have a measurement showing it is elevated, and you take one confirmatory measurement that comes back different, you trust the no-contamination value and throw out the contamination measurement. There is no reason to believe the second measurement rather than the first. This is pure bias. As is the only requirement for confirmatory measurements is if a reading has been high, not if it was low. If the concern were public health rather than Navy expenditures, the bias would have been in the other direction.

5-5 “Determining the extent of elevated activity for ROCs without a significant gamma emission, such as 90Sr and 239Pu, will require collecting additional soil samples or **establishing a correlation between the difficult-to-detect ROC and 226Ra**. Even when a correlation can be determined, the scan survey objectives will need to be reviewed and adjusted to account for detecting 226Ra at lower activity levels. If the elevated activity is associated with 90Sr or 239Pu results **significantly above background**, a Field Change Request will be initiated to document the characterization of any potential areas of elevated activity.” Note that the issue isn’t any longer exceeding release criteria; it has to be, not just above (already inflated background values) but significantly above background, not defined.

“If all alpha or beta static measurement or ROC-specific soil sample analysis result are less than the RGs or investigation levels, compliance with the Parcel G ROD RAO is achieved.” This makes no sense; there is only 1 soil investigation level, for one radionuclide, because the gamma scanner can’t see anything else.

“A NORM background evaluation will be performed for every sample where the 226Ra concentration exceeds the average RBA 226Ra concentration by more than the RG of 1.0 pCi/g. The purpose of the NORM background evaluation is to ensure the most representative estimate of background available is used to evaluate 226Ra results for comparison with the RG, not to validate analytical methods.” Deeply troubling; the standard is to use the RBA they already set; but if it goes more than 1 pCi over that (i.e., is over the release limit), they will go back and CHANGE the background. Again, they aren’t doing this if the value is below the RG; pure bias.

“The 226Ra background at HPNS is known to vary significantly in different areas of the site. **Since 238U is not a ROC at HPNS, 238U concentrations are an acceptable representative of background** for all radionuclides included in the naturally occurring uranium decay series, which includes 226Ra. By definition, 226Ra concentrations are considered background when 226Ra is in secular equilibrium with 238U, which means the 226Ra concentration is equal to the 238U concentration. Therefore, the 238U concentration can replace the average RBA 226Ra concentration as a more representative estimate of background for a specific sample.” This is plainly wrong and biased. As indicated above, there was more than a ton of U238 at HP from HP activity; it certainly must be a ROC, which bars its use as radium background due to secular

equilibrium. Using U238 as the Radium background is irresponsible.

“Alpha spectrometry provides ²³⁸U analytical results of acceptable quality for the NORM evaluation. However, the gamma spectroscopy results for ²²⁶Ra are based on larger volumes of soil and are not always comparable with alpha spectrometry results. Therefore, an analytical method for ²²⁶Ra comparable with alpha spectrometry for ²³⁸U is required to perform the NORM evaluation. For example, radon emanation analyses for ²²⁶Ra have similar sample support in terms of sample preparation and sample volume compared to alpha spectrometry for ²³⁸U, and are considered comparable for purposes of the NORM evaluation. Alternatively, gamma spectroscopy uses minimal sample preparation and much greater volumes of soil for analysis, and may result in significantly different results based solely on the analytical method compared to alpha spectrometry and radon emanation.” Troubling; they don’t even have comparable measurement techniques for radium and uranium. They say radon emission analyses “are considered comparable for purposes of the NORM evaluation.” Considered comparable by whom? They always slide over such language. And comparable just for NORM evaluation, meaning not generally comparable and questionable for NORM. The radium background is already grossly inflated; they want to inflate it even further by declaring the amount of U-238 to be the radium background, even though there is U contamination at Hunters Point and even though the measurement techniques aren’t the same.

They had licenses for (which only accounts for a fraction of the radioactive materials there) 2520 pounds of natural or depleted uranium, essentially therefore all U-238. this doesn’t count all the U238 from ship decontamination (e.g., U238 tamper, and third stage of H bombs) and fallout debris brought back. You can’t use U-238 as a NORM at Hunters Point, or to assume secular equilibrium so you can claim it as radium background.

“The NORM background evaluation simply replaces the average RBA ²²⁶Ra gamma spectroscopy concentration with a ²³⁸U alpha spectrometry concentration as a more representative estimate of background for a specific sample. At the same time, the ²²⁶Ra gamma spectroscopy result is replaced with an analytical result using a method comparable to alpha spectrometry (such as radon emanation). If the revised ²²⁶Ra result, using an analytical method comparable to alpha spectrometry, exceeds the revised background value based on the ²³⁸U alpha spectrometry result by less than the RG of 1.0 pCi/g, the sample demonstrates compliance with the Parcel G ROD RAO. If the revised ²²⁶Ra result exceeds background by more than 1.0 pCi/g, additional evaluation may be performed. If the NORM background evaluation is inconclusive, more analysis may be conducted.” We’ve demonstrated repeatedly above why this is obviously wrong and intended to reduce cleaning up that which should be cleaned up. If over the RG, that should be the end of it; instead, they test with a different measurement, of unclear accuracy “such as radon emanation” and alpha spec for U238, subtracting U238 level from the radium level. If the second measurement is OK, the first is thrown out (bias always to throwing out); then if that is not OK, that also should be the end of it, but instead, more analysis is done. Everything is biased against public health. Also, details of what techniques they will use are not provided, so can’t review to see if credible at all; don’t even specify what technique, but just “comparable to alpha spec, such as radon emanation.” Much room for mischief; no transparency; hide the ball.

5-6 key This include numerous games to throw out readings that are above 1 pci/g above background (e.g. further inflating background, requiring measurements by several techniques before you will accept a high reading, etc.); fail to deal with the fact that 1 pCi/g above background is an immense cancer risk, far outside EPA risk range.

They plan to evaluate whether the RBA data are representative of the contaminated area being studied; by definition the contaminated should be different.

They are using median values for the entire SU – but averaging is forbidden by EPA for situations such as residential use where use is non-random. Under CERCLA they are required to use EPA’s CERCLA guidance, but are repeatedly violating it. They are setting a figure of over 3, and perhaps over 2, as non-representative; troubling.

Says using average values over wide areas, comparing to derived concentration values for wide areas – none of which they are supposed to do, as discussed above. EPA guidance requires them to use “not to exceed,” not average; release criteria, not derived concentration values for wide areas, etc.

Whole point of this discussion is to throw out reference background areas and replace them with ones with higher background. Not clear how they can claim they can look at SU/TU compared to RBA and if ratio is high, determine RBA wrong; why is it not that the SU/TU is contaminated?

Also uses “NORM evaluation”—the substitution of high U-238 values for actual background radium numbers, which we’ve shown is wrong and biased.

5-7 gives themselves a whole range of actions to take if, after all the games to declare something not contaminated, still seems to be, so they don’t have to clean it up.

6-1 says Perma-Fix will do the work. Who is Perma-Fix? Navy says no contractor selected to do the work, aside from Jacobs Engineering doing some buildings. (Navy Q&A). But p 1 of this plan says CH2MHill and its subcontractor Perma-Fix will do it. What is going on?

refers to Appendix C MOU, but that is for 2 or 3 companies that aren’t identified as part of this plan at all.

7-1 won’t disclose where it will be staged or disposed of. Doesn’t define how they will divide between LLRW and non-LLRW

7-2 very troubling: “7.2.1 Waste Classification Accumulated waste deemed to be radioactive waste will be classified as LLRW based on 49 CFR, basewide requirements, or disposal facility requirements. Waste characteristics, including the radionuclides present and their associated specific activities, will be measured by an available standardized test method per the SAP, such as gamma spectroscopy, strontium analysis, or alpha spectrometry.” 49 CFR what? why Title 49? These are Department of Transportation placarding requirements for trucks; they are not regulations defining what is low level radioactive waste and has to be disposed of in a licensed

LLRW site. Under current rules, any waste with radiation above background is LLRW and has to go to a licensed LLRW site. The passage declines to say what basewide requirements? what disposal facility requirements? It should be far more clear: anything with radioactivity above background is LLRW. At minimum, anything over proper release criteria (EPA current default PRGs for unrestricted use.) NO NO NO—49 CFR is DOT transport regs—those are not regs for determining what is LLRW for disposal purposes. Doesn't mention California law, the Keeley Act, barring LLRW in anything other than a specially licensed LLRW site with multiple barriers, retrievable, monitorable, etc. Ignores Governor Davis's moratorium, still in effect, barring disposal in municipal landfills.

Does not specify what rad concentrations, not averaged, will be considered LLRW waste. There is no Below Regulatory Concern level. NRC tried to establish a BRC level; Congress struck it down.

P. 7-9 “7.5 Compliance with CERCLA Offsite Rule

Consistent with the CERCLA Offsite Rule, wastes generated from remediation activities, such as contaminated soil or hazardous waste, at a CERCLA site may be transferred only to offsite facilities that have been deemed acceptable by the USEPA Regional Offsite Contact (40 CFR 300.440). With Naval approval, the contractor will request proof of Offsite Rule approval from the offsite disposal facility before transferring any wastes to an offsite facility.” That isn't the CERCLA offsite rule; and this doesn't say you will even get EPA approval, merely that the contractor will request info from disposal facility. Not what is required; particularly if they don't disclose to the recipient facility the fact that the waste is still radioactive (if that is what they intend to do, seemingly), even if below release criteria. REPETITION OF ORIGINAL HUNTERS POINT PROBLEM OF SENDING RADWASTE TO SITES NOT LICENSED OR DESIGNED FOR RADWASTE.

7-10 “Uncontaminated debris may be sent to municipal landfills, landfills designated for construction/demolition debris or a recycling facility.” NO. Repeating the same mistake. No definition of “uncontaminated.” If it means below release criteria for, say, restricted release (based on assumption of no groundwater use, cement cap, no residences or no gardens; or failing to consider direct contact with the recycled material), then sending it to municipal landfills or recycling is inappropriate, as there are different exposure pathways. And violates BRC prohibition, and Governor's moratorium. Note not a word about the gubernatorial moratorium.

8-3 Only monitoring for and limiting a handful of radionuclides; once again, declaring all others to not be ROCs, when scores of radionuclides are of concern at HP.

Inappropriate: set Derived Allowable Concentrations for air emissions at occupational levels, not levels for public; 100 times too high.

Appendix A

taking only 5 samples per RBA—not enough for appropriate statistics and keeping error margins small.

key again: SAP kept secret, which is where the detail and really important material are buried 2-1 surface 0-6” -- which?, matters for fallout, which tends to be in the upper part of the profile. subsurface, 1-2 foot intervals up to a depth of 10’ which? 1 or 2 foot intervals? to what depth? too much room for altering outputs.

off-base only set at surface, 0-6”? No subsurface? p3-3 says no subsurface for offsite. No good reason given. If fallout offsite is on surface and not subsurface, as would be expected, you need to know that, rather than assuming same level of fallout through the profile.

3-3 only 5 surface samples per RBA; 25 subsurface—simply at one spot, at 5 depths, from one core?

fn a p. 3-2, again says All RGs will be applied as concentrations above background. Again, violates and tries to illegally change the ROD without changing the ROD; violates EPA policy as well.

U-235 is identified as a ROC in the table and given a cleanup level; so throwing out radium readings because they may also include some U-235 is nonsensical, because it doesn’t matter to the person exposed if they are being irradiated by pure radium or radium plus uranium-235.