

September 18, 2009

Ms. Laurie Breyer  
SEC Petition Counselor  
Office of Compensation Analysis and Support  
National Institute for Occupational Safety and Health  
4676 Columbia Parkway, Mail Stop C-46  
Cincinnati, Ohio 45226

Re: Petition for SEC for X-10

Dear Ms. Breyer:

Since my previous e-mail to you, I have had my NIOSH report of dose reconstruction. In a short period of time from 8-28-09 to 8-31-09 the calculations were performed and peer review was completed, and the dose reconstruction approved by 9-2-09. I received their letter with the results on 9-14-09. Since my letters to the Ombudsman and to Karen Cumberland (final judge FAB), I wonder if someone speeded up the process for me because I had been told it would take up to 2 years for this process and it was first come, first served. If someone helped speed it up - THANK YOU!

My reconstruction was only a partial as explained to me on my interview with NIOSH. That was skin dose of 29,300 to each of my cancers. Since my partial external dose resulted in a probability of causation greater than 50%, to expedite this claim per the provisions of 42CFR - 82.10(k)(1), a detailed uncertainty analysis was not conducted. I have been claiming 33 REM for skin dose and 22 whole body dose, and I was told before I left that my whole body dose was 35 REM. I wonder how high a full reconstruction would have been on me?

Also since the 8-19-09 e-mail I sent to you, I have had my appeal hearing on the recommended decision to deny my claims for . I had asked if they could shorten the time it took for dose reconstruction at NIOSH. After thinking about it, my answer would be to issue an SEC (special exposure cohort) at X-10, the same as at the other plants. I know that this failed in the face of the answer I received from Laurie Breyer, SEC Petition Counselor of NIOSH. I am going to petition today for SEC rating with X-10 from 1950 through 1980 (these times are times that I know of when everyone working around the X-10 plant ought to be included because of contamination of the whole area by drains from the buildings, especially ones I worked in, diversion boxes, settling basins, and White Oak Creek and Lake). There was an incident on 11-20-59 (ORNL-2989 UC-41 -Health and Safety) which was a Plutonium 239 Release that sprayed high levels of alpha, beta, gamma out the back of Building 3019. This added to the previous contamination.

The high level of contamination of Building 3505 (the Metal Recovery Facility) is shown in the inter-office correspondence to R.W. Schalh from F.V. Williams/H.O. McNabb, with Subject Contamination Release at the Metal Recovery Facility (no date on the correspondence). This report mentions the 10-83 decontamination and decommissioning of this building. In January of 1984 work began on the canal area. On 5-22-84 a crew was working to clean sludge from the sump and floor of the canal of Building 3505 and some of the workers were found to be contaminated as shown in the Report of Investigation that I am enclosing. I did a lot of analysis for the Metal Recovery Facility.

I was told that dose reconstructions could take up to two years to get started, and it was first

come, first served. There appears to be a backlog of cases. If X-10 was an SEC class, this would save a lot of time (which was the second part of my original e-mail question) and cut down the two year wait process. The final result of the dose reconstruction would be about the same as was my result because of the high levels of radiation and contamination at X-10, and it would be to NIOSH's advantage because of the time it would save them, and to DOL because of time and money saved..

I officially petition for special exposure cohort class at X-10 for at least the years 1950 through 1980.

I will send you a copy of this by mail, along with some enclosures that I'm unable to send by e-mail.

Thank you.

cc: James McQuade, Office of the Ombudsman for EEO/CPA, Part E, Frances Perkins Bldg, Room N2454, 200 Constitution Ave., NW, Washington, DC 20210  
Lamar Alexander, 455 Dirksen Senate Office Bldg, Washington, DC 20510  
Zach Wamp, U.S. House of Representatives, 1436 Longworth House Office Bldg., Washington, DC 20515-4203  
John J. Duncan, Jr., U.S. House of Representatives, 2207 Rayburn House Office Bldg., Washington, DC 20515-4202  
Bob Corker, 185 Dirksen Senate Office Bldg, Washington, DC 20510  
Karen Cumberland, U.S. Dept. of Labor, Final Adjudication Branch, 400 West Bay St., Room 63B, Jacksonville, FL 32202

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**From:** "NIOSH OCAS (CDC)" <ocas@cdc.gov>  
**To:**  
**Sent:** Wednesday, September 09, 2009 8:34 AM  
**Subject:** RE: sec rating for x-10, ornl site in Oak Ridge, Tn.

Your dose reconstruction has been completed and was sent to you on September 3, 2009. If you have not received it yet you should be receiving it soon. Please let me know if you have any questions about your report. If not, our contractor Oak Ridge Associated Universities (ORAU), will be contacting you soon to schedule a closeout interview to go over the report with you and see if you have any questions.

As far as an SEC class for X-10, when this law was passed congress included 4 SEC classes. Those are K-25, Portsmouth, Paducah, and Amchitka. I am not sure why those 4 were added but congress chose to include them in the law. Since then, numerous classes have been added to the SEC through individuals petitioning NIOSH to add a class and through NIOSH determining a class needs to be added. To this point, no one has submitted an SEC petition that qualifies for evaluation. Meaning, as of now, no one has provided a basis as to why we cannot do sufficiently accurate dose reconstructions for employees at X-10.

In regards to an SEC, it does not matter how much radiation existed at a facility or even contamination. What includes a class in the SEC is do we have records regarding the radiation and contamination. Do we have individuals who were involved in these activities who were monitored? Are those monitoring records reliable? Do we have site wide monitoring? Incident reports? Etc. If we have the information we can do a dose reconstruction and therefore a class will not be added to the SEC. It is somewhat complex and I would be happy to call you discuss this over the phone as it might be easier to explain.

In relation to your additional health conditions (COPD, emphysema, and others) you should definitely file a Part E claim with DOL. You may already have a Part E claim but I would call them and make sure if you don't know.

Again, if you have not yet received your dose reconstruction report you will be receiving it soon.

If you have any additional questions, please do not hesitate to contact me by email or at 513-533-6844 or 1-877-222-7570.

Laurie

Laurie Breyer  
SEC Petition Counselor  
Office of Compensation Analysis and Support  
National Institute for Occupational Safety and Health

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**From:** '  
**Sent:** Sunday, September 06, 2009 7:43 PM  
**To:** NIOSH OCAS (CDC)  
**Cc:**  
**Subject:** Fw: sec rating for x-10, ornl site in Oak Ridge, Tn.

9/18/2009

# Synergy

From Wikipedia, the free encyclopedia

**Synergy** (from the Greek *syn-ergos*, *συνεργός* meaning working together) is the term used to describe a situation where different entities cooperate advantageously for a final outcome. Simply defined, it means that the whole is greater than the *sum* of the individual parts. Although the whole will be greater than each individual part, this is not the concept of synergy. If used in a business application it means that teamwork will produce an overall better result than if each person was working toward the same goal individually.

- A dynamic state in which combined action is favored over the sum of individual component actions.
- Behavior of whole systems unpredicted by the behavior of their parts taken separately. More accurately known as emergent behavior.
- The cooperative action of two or more stimuli or drugs.

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## Drug synergy

Drug synergism occurs when drugs can interact in ways that enhance or magnify one or more effects, or side effects, of those drugs. This is sometimes exploited in combination preparations, such as codeine mixed with acetaminophen or ibuprofen to enhance the action of codeine as a pain reliever. This is often seen with recreational drugs, where 5-HTP, a serotonin precursor often used as an antidepressant, is often used prior to, during, and shortly after recreational use of MDMA as it allegedly increases the "high" and decreases the "comedown" stages of MDMA use (although most anecdotal evidence has pointed to 5-HTP moderately muting the effect of MDMA). Other examples include the use of cannabis with LSD, where the active chemicals in cannabis enhance the hallucinatory experience of LSD use.

Negative effects of synergy are a form of contraindication, which for instance can be if more than one depressant drug is used that affects the central nervous system (CNS), an example being alcohol and Valium. The combination can cause a greater reaction than simply the sum of the individual effects of each drug if they were used separately. In this particular case, the most serious consequence of drug

synergy is exaggerated respiratory depression, which can be fatal if left untreated.

## Pest synergy

Pest synergy would occur in a biological host organism population where, for example, the introduction of parasite A may cause 10% fatalities, and parasite B may also cause 10% loss. When both parasites are present, the losses would normally be expected to total less than 20%, yet in some cases, losses are significantly greater. In such cases it is said that the parasites in combination have a *synergistic* effect.

## Toxicological synergy

Toxicologic synergy is of concern to the public and regulatory agencies because chemicals individually considered safe might pose unacceptable health or ecological risk when exposure is to a combination. Articles in scientific and lay journals include many definitions of chemical or toxicologic synergy, often vague or in conflict with each other. Because toxic interactions are defined relative to the expectation under "no interaction," a determination of synergy (or antagonism) depends on what is meant by "no interaction." The United States Environmental Protection Agency has one of the more detailed and precise definitions of toxic interaction, designed to facilitate risk assessment. In their guidance documents, the no-interaction default assumption is dose addition, so synergy means a mixture response that exceeds that predicted from dose addition. The EPA emphasizes that synergy does not always make a mixture dangerous, nor does antagonism always make the mixture safe; each depends on the predicted risk under dose addition.

For example, a consequence of pesticide use is the risk of health effects. During the registration of pesticides in the US exhaustive tests are performed to discern health effects on humans at various exposure levels. A regulatory upper limit of presence in foods is then placed on this pesticide. As long as residues in the food stay below this regulatory level, health effects are deemed highly unlikely and the food is considered safe to consume.

However in normal agal practice it is rare to use only a single pesticide. During the production of a crop several different materials may be used. Each of them has had determined a regulatory level at which they would be considered individually safe. In many cases, a commercial pesticide is itself a combination of several chemical agents, and thus the safe levels actually represent levels of the mixture. In contrast, combinations created by the end user, such as a farmer, are rarely tested as that combination. The potential for synergy is then unknown or estimated from data on similar combinations. This lack of information also applies to many of the chemical combinations to which humans are exposed, including residues in food, indoor air contaminants, and occupational exposures to chemicals. Some groups think that the rising rates of cancer, asthma and other health problems may be caused by these combination exposures; others have other explanations. This question will likely be answered only after years of exposure by the population in general and research on chemical toxicity, usually performed on animals.

## Human synergy

Human synergy relates to interacting humans. For example, say person A alone is too short to reach an apple on a tree and person B is too short as well. Once person B sits on the shoulders of person A, they are more than tall enough to reach the apple. In this example, the product of their synergy would be one apple. Another case would be two politicians. If each is able to gather one million votes on their own, but together they were able to appeal to 2.5 million voters, their synergy would have produced 500,000 more votes than had they each worked independently. A song is also a good example of human synergy,

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**From:** "OMBUDSMAN" <OMBUDSMAN@dol.gov>  
**To:**  
**Sent:** Friday, August 28, 2009 5:31 PM  
**Subject:** RE: sec rating for x-10, omi site in Oak Ridge, Tn.

Dear

Thank you for your email to Office of the Ombudsman concerning your claim which was filed with the U.S. Department of Labor's Division of Energy Employees Occupational Illness Compensation (DEEOIC) under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). In your letter, you stated that you had received a recommended decision partially denying your claim and that NIOSH was making a determination on the rest of your claim. You requested help from this office. We will do what we can to help you.

As you may know, the Office of the Ombudsman was created by Congress to, among other duties, provide information on the benefits available under Part E of the EEOICPA and on the requirements and procedures applicable to the provision of such benefits. The scope of the Office's duties does not extend to EEOICPA Part B claims. Furthermore, the office does not make decisions to accept, deny or open claims. Nor do we participate in the SEC process. Additionally, Congress requires the Ombudsman to submit annually a Report detailing the number and types of complaints, grievances, and requests for assistance received by the Ombudsman each year, including an assessment of the most common difficulties encountered by claimants and potential claimants. Our most recent report, covering calendar year 2008, was filed on February 13, 2009 and is available on our website (<http://www.dol.gov/eeombd>).

Since you have asked this Office for help, we may need to contact others. In order to contact anyone on your behalf or forward your email to other individuals, you must provide permission to us to do so because we treat all communications as confidential unless we have authorization to share them. This permission can be given by email.

Also, the Office of the Ombudsman is independent of DEEOIC and, because we are independent, we do not have access to information about or decisions on your claim and we need this information to provide you with informed and relevant help and advice. Therefore, it would be useful for us to have a copy of relevant paperwork you have received from DEEOIC concerning your claim. You can send this information by email (if you have a scanner), fax (1-202-693-5899), or by mail to: Office of the Ombudsman for Part E of EEOICPA, Frances Perkins Building, Room N2454, 200 Constitution Ave., N.W., Washington, DC 20210. Our toll-free phone number is 1-877-662-8363. Initially, I would like to see the recommended decision on your claim if that is possible. If you are unable to provide this document, let me know and I will attempt to get it from another source.

You additionally asked this office to address two questions. One concerned SEC status and one concerned NIOSH. As stated above, this Office's mandate does not extend to those areas.

SEC status is determined by the President based upon advice from the Advisory Board on Radiation and Worker Health. The Advisory Board has a web site which is located at <http://www.cdc.gov/niosh/ocas/ocasadv.html>. They are in a much better position to answer your question and can be contacted by facsimile sent to the attention of the Advisory Board at 513-533-6826 or electronically by e-mail to [ocas@cdc.gov](mailto:ocas@cdc.gov).

9/18/2009

As for questions about NIOSH, I recommend that you contact the National Institute of Occupational Safety and Health (NIOSH) Ombudsman in order to obtain help and information. The NIOSH Ombudsman, Denise Brock, is there to, among other duties, assist EEOICPA claimants with dose reconstruction issues. She can be reached by email at [db\\_dcch@hotmail.com](mailto:db_dcch@hotmail.com) or by telephone at 888-272-7430 (toll-free).

I look forward to hearing from you.

James McQuade  
Office of the Ombudsman for EEOICPA, Part E

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**From:**  
**Posted At:** Wednesday, August 19, 2009 5:07 PM  
**Posted To:** OMBUDSMAN  
**Conversation:** sec rating for x-10, ornl site in Oak Ridge, Tn.  
**Subject:** sec rating for x-10, ornl site in Oak Ridge, Tn.

My name is [redacted] I worked 21 years as a [redacted] at X-10 in three different buildings, and I have proof from DOE that I have 22 total body REM and skin dose of 33 REM. Also, I feel that these records are not exactly right, as I remember being told before I left that I had 35 whole body dose. I am 75 years old, have a case of [redacted] that has me now so that I have to [redacted] and soon (if my health continues to decline) will be needing a wheelchair. I have had two abnormal [redacted] tests. I have surgically removed [redacted] since 1960, have [redacted] and have had three or four surgically removed, and now am awaiting a dose calculation from NIOSH. I have been told that it could take up to two years to find out the results from them. If my health declines, I may not even be around in two years.

Here is my question for you - Why, with X-10 having the highest levels of alpha, beta, gamma, and neutron radiation of any of the plants in Oak Ridge, is X-10 not included in the special cohort category (SEC). I could use the compensation now for my [redacted], rather than having to wait two years, as I am trying to ready my home for handicap accessibility, including wheelchair ramp, ramp walkways around the house, means to transport my motorized wheelchair, etc., not to mention the medicines.

I have had a recommended final decision of denial on my claims for [redacted], and [redacted]. The [redacted] gives me only a medical card for that.

Is there some way that the time for dose reconstruction can be shortened by NIOSH? Is there any way I can get them to get started on mine now?

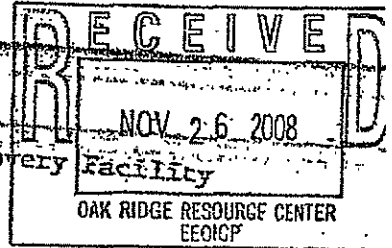
Please advise.

Thank you.

9/18/2009

To: R. W. Schaich  
 From: F. V. Williams/H. O. McNabb

Subject: Contamination Release at the Metal Recovery Facility



History

The Metal Recovery Facility (MRF), Building 3505 (see Appendix 1), located northwest of Building 3517 has been in a standby position since 1970. During the 1950's the MRF was used for the recovery of transuranium products. The facility consists of a building which contains 7 cells, a dissolver pit, makeup area, control room, office, shop, and an outside storage canal. Because of the deteriorating condition of the facility and the residual activity involved, the area has been assigned top priority by the SFMP for cleanup and decommissioning. Because of the nearness to Building 3517, surveillance and D&D activities have been assigned to FPDL personnel.

In the summer of 1976, bug catchers turned up bugs and mosquitoes probing to the canal. In October of 1976, a cleanout of the canal was started. The water was pumped to Tank W-6 in the LLW tank farm. The sides of the canal were pressurized and the waste pumped to W-6. The canal was refilled with water in December of 1976. During this period, probes and smears were taken of the canal area. The north and south walls probed 7 to 10 R/hr. The west wall probed 4 R/hr, and the general background approximately one-half way down in the canal 4 R/hr. Chokers and tools left in the canal probed up to 10 R/hr. The reading at the top of the canal was 400 to 800 mr/hr. Kerosene was poured over the canal and wooden covers were installed. In later years aluminum covers were installed to replace the wooden covers. The remaining sludge left in the canal was sampled and analyzed with the following results.

Cesium-137	wet weight	0.0252 mCi/g
Strontium-90	wet weight	0.163 mCi/g
Uranium	wet weight	273.0 ng/g
Plutonium	wet weight	7.1 uCi/g

Smears taken on the hoist, I beam, and upper surfaces during this period were to 39,000 d/m. These areas were never cleaned. Smears taken on the asphalt around the canal were up to 380,000 d/m. They were cleaned somewhat, but work was stopped in December of 1976 due to lack of funds. The canal area is fenced off and has been a "C" zone area to the present time.

In October of 1983, decontamination and decommissioning (D&D) of the MRF began under the funding of the SFMP. In January of 1984, D&D work began on the canal area. To date all tools and equipment have been removed, boxed, and sent to the SWSA for disposal. All the water and sludge has been pumped to Tank W-10.



## REPORT OF INVESTIGATION

### Minor Contamination Incident at Building 3505

#### Summary

A crew of four was working to clean sludge from the sump and floor of the canal of Building 3505 the afternoon of Tuesday, May 22, 1984. At the end of their work day the two chemical operators of the crew were found to be contaminated. One operator was found with contamination at the neck and ~ 3,000  $\beta, \gamma$  d/m in the right nostril and ~ 2,000  $\beta, \gamma$  d/m in the left nostril. Alpha contamination up to 60 d/m was present on the swab taken in the right nostril. The other operator was found to have ~ 3,000  $\beta, \gamma$  d/m present on the chest area. Cleaning the nasal passages and showering reduced that of the former to background levels, and showering reduced that of the latter to background levels. Both were given urine and fecal kits and scheduled for the whole body counter.

Surveys were made of ground surfaces in the immediate area; the area immediately adjacent to and south of the canal was found to be contaminated. Two smears indicated the presence of 100,000 and 70,000  $\beta, \gamma$  d/m; ten others counted < 500  $\beta, \gamma$  d/m. The area was roped off to establish a temporary "C" zone.

By 5:30 p.m. all members of the crew had departed the Laboratory, the Laboratory Shift Supervisor (LSS) had been informed as to why the area south of the canal was roped off, and the shift HP had been briefed.

The LSS and the shift HP went to the 3505 site to obtain additional information firsthand. Subsequently, the LSS notified selected Division Directors and Central Management personnel. A work crew was called in to begin the cleanup job that was planned for the next morning. This action was taken because there was the possibility of rain which could possibly cause radioactive materials to reach White Oak Creek.

Results of whole body counting for the operator having nasal contamination were positive, but the indicated uptake was of no concern; it was well within permissible limits. There was no indication of uptake for the other operator.

The surface area around the canal has been cleaned, and authorization has been given for work in the area to proceed.

#### History

The Fission Products Development Laboratory Annex, Building 3505, located just northwest of Building 3517, has been in a standby position since 1970. During the 1950's it was used for the recovery of transuranium products.