

## Summary Document

### Agent Orange at Johnston Island

On November 21, 1971 the New York Times reported in an article entitled “Defoliant Leaving Vietnam” that more than a million gallons of Agent Orange (AO) will be taken back to the United States from Vietnam to be destroyed. The portion of this operation of re-drumming and movement to Johnston Island, aka Johnston Atoll, was named Project **PACER IVY** (see map and photographs) with the remaining herbicide stocks stored at Gulfport, Mississippi.<sup>1</sup>

During the period from 1972 to 1977, Johnston Island was used for storage of Agent Orange, aka Herbicide Orange (HO). A total of 1.37 million gallons of HO in 26,300 fifty-five gallon drums were transferred to Johnston Island from South Vietnam in 1972. The drums were stored on a 4-acre site on the northwest corner of the Island.

***Corrosion of drums while in storage resulted in HO leakage at a rate of approximately 20 to 70 drums per week*** (Emphasis added). Approximately 49,000 pounds of HO are estimated to have escaped into the environment annually during the storage period with the site contaminated with the active ingredients of HO: 2,3,7,8-tetrachlorodibenzodioxin (TCDD); the n-butyl ester of 2,4-dichlorophenoxy acetic acid (2,4-D); and the n-butyl ester of 2,4,5-trichlorophenoxyacetic acid (2,4,5-T),<sup>2</sup> in addition to approximately 113,400 kilograms that was accidentally spilled.<sup>3</sup>

Shamefully, the deception, fraud and political interference that have characterized government sponsored studies on the health effects of exposure to Agent Orange and/or dioxin has not escaped studies ostensibly conducted by independent reviewers, a factor that has only further compounded the erroneous conclusions reached by the government.<sup>4</sup>

As documented in the following paragraphs, with excerpts from United States Government agency reports, the United States Government acknowledges the contamination of the potable water supply at Johnston Island from Agent Orange.

Due to the island’s small size, remote location in the central Pacific Ocean, and lack of fresh water, Johnston Island, an unincorporated territory of the United States, was uninhabited and never supported an indigenous or permanent human population.<sup>5</sup>

Because of the high permeability of the soil and relatively low precipitation, there are no natural bodies of fresh water (DNA 1994). ***The source of potable water on Johnston Island is from groundwater supplied by up-gradient wells and processed through a reverse osmosis system housed in the Water Treatment Plant*** [Emphasis added] <sup>6</sup>

***Agent Orange contaminants have the ability to migrate away from actual locations via river channels and the food chain.*** [Emphasis added] <sup>7</sup> Unfortunately, if a leak occurs during a rain storm or there is unabsorbed herbicide on the ground during a rain storm, the transport of herbicide to drainage ditches can occur.<sup>8</sup> Far more unfortunate and disconcerting is the late acknowledgement that this scenario was possible, because drainage ditches specifically constructed for water collection are not immune from dioxin migration on an isolated, remote island. The report, written in 1977 was four plus years late in determining that Agent Orange could and did drain into the water collection ditches, thereby contaminating the personnel assigned to Johnston Island. A review of Veterans Administration records of claims filed by individuals

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assigned to Johnston Island from 1972-1977 that have contracted “qualified” diseases will confirm exposure.

In the 1991 Brooks Air Force Base report (fourteen years after the Agent Orange stockpile was removed from the Island) the government conceded “The site is now contaminated with the active ingredients of HO: 2, 3, 7, 8-tetrachloro-dibenzodioxin (TCDD); the n-butyl ester of 2, 4-dichlorophenoxy acetic acid (2, 4-D); and the n-butyl ester of 2, 4, 5-trichlorophenoxyacetic acid (2, 4, 5-T).”<sup>9</sup> As late as February 2008, The United States Fish and Wildlife Service website stated that, “. . .dioxin (Agent Orange), which contaminates at least four acres of land and has migrated to the marine environment.”<sup>10</sup> The impact of the effect of contamination was not lost on the Environmental Protection Agency as noted in the Brooks Air Force Base Report: “Other release processes (EPA, 1989a) that may be important are apparent from the fish tissue data. These data suggest that one or both of the following release processes may also be important: leaching of TCDD (and possibly 2,4,3 and 2,4,5-T) from the soil via surface and ground water migration into the ocean; and migration of contaminated soil particles into the ocean due to water drainage.”<sup>11</sup>

In 1978, when the Department of Defense decided there was no legitimate domestic use for Agent Orange, they decided to burn thousands of barrels left over from the war at sea off Johnston Island, (Project **PACER HO**). The EPA provided major advice for taking care of the personnel on board the incineration ship, *Vulcanus*. Agent Orange was burned there at over 1,000 degrees C. The EPA 1978 manual said: The highly toxic contaminant present in Herbicide Orange is 2, 3, 7, 8-tetrachlorodibenzo-pdioxin.

The US Air Force has analyzed Herbicide Orange stocks and found TCDD concentrations ranging from 0.05 to 47 ppm [parts per million]; Times Beach was evacuated at 2 ppb—parts per billion. Pooled stocks would have an estimated average TCDD concentration of 1.9 ppm. The principal Herbicide Orange constituent of concern, TCDD, has been found to be highly embryo toxic, teratogenic (tending to cause developmental malfunctions and monstrosities,) and acnegenic and is lethal in the microgram-per-kilogram of body weight range and it presents an unacceptable cancer risk when found in water in parts per quadrillion.<sup>12</sup> The contractor responsible for the clean-up, Parsons, founded in 1944, and is one of the largest 100% employee-owned management, engineering, and construction companies in the United States, with revenues exceeding \$3.3 billion in 2006, stated “The contract also entailed excavating, transporting, and stockpiling 15,000 tons of soil contaminated with Agent Orange.”<sup>13</sup> ***If the authorized protocol for destruction of dioxin required incineration at over 1,000 degrees Celsius, then a reverse osmosis water treatment plant cannot purify water from dioxin contamination.***

It is obvious from the multiple agency referenced government publications and documents that the United States Government has conceded that Agent Orange was stored on Johnston Island, that Agent Orange leaked into the soil and water supply and contaminated the environment and wildlife. The government has also acknowledged debilitating illnesses to veterans that served in Vietnam and from other countries; Australia, Korea, New Zealand, and Canada for example, were subjected to the same

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exposure as those personnel that were on Johnston Island yet continues to deny responsibility for its actions at Johnston Island to its own military personnel. How can it be conceived that if an entire isolated, remote island with no fresh water supply and its surrounding ecosystem was continuously contaminated with dioxin, that its human inhabitants whom ate, swam and drank the food (including indigenous fish caught) and water prepared with the same dioxin contaminated water that polluted that environment can come away unscathed?

Academic periodical documents within the past two years also substantiate new and continuing issues related to Agent Orange:

1. In two new studies, Vietnam veterans with the highest exposure to herbicides exhibited distinct increases in the prevalence of hypertension, says the committee that wrote the report. The analysis is the seventh update since the early 1990s in a congressionally mandated series by IOM that has been examining evidence about the health effects of these herbicides.<sup>14</sup>
2. Exposure to Dioxins Influences Male Reproductive System, Study of Vietnam Veterans Concludes.<sup>15</sup>
3. Agent Orange Causes Genetic Disturbance in New Zealand Vietnam War Veterans, Study Shows.<sup>16</sup>

To this day, the Veterans Administration has yet to address the issues of Johnston Island as requested by former Representative Lane Evans in his letter to then Veterans Administration director Anthony Principi in 2004<sup>17</sup> and continues to deny medical attention to the victims of Agent Orange exposure on Johnston Island, many of whom I know.

With regards to the dioxin contained in Agent Orange, “***No safe exposure levels have been found.*** (Emphasis added) It has been strongly linked to many cancers and is very harmful to all living things. Chemically known as: 2, 3, 7, 8-tetrachlorodibenzoparadioxin

or 2, 3, 7, 8-T.”<sup>18</sup> To quote Admiral Zumwalt, “Since science is now able to conclude with as great a likelihood as not that dioxins are carcinogenic directly and indirectly through immunosuppression, and since a large proportion of those exposed to dioxin can be as ascertained; I am of the view that the compensation issue for servicereLATED

illnesses with exposure to Agent Orange should be resolved in favor.”<sup>19</sup>

As a final thought, two years after the stockpile of Agent Orange had left Johnston Island in 1977 the United States Air Force contracted with the University of Utah to perform soil and water analysis on samples taken from the island. Five of these samples were of the potable water and contained TCDD, <sup>20</sup> corroborating the 1977 USAF Logistics Command report that the drainage ditches were vulnerable to dioxin runoff. How is it possible that the deadliest toxin created by man as a waste by-product from the paper-pulp industry, that is not naturally occurring, can find itself in a “purified, potable water system” on one of the worlds most isolated, remote locations?

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#### FOOTNOTES

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2. OCCUPATIONAL AND ENVIRONMENTAL HEALTH DIRECTORATE, Preliminary Public Health, Environmental Risk, And Data Requirements Assessment For The Herbicide Orange Storage Site At Johnston Island, Brooks Air Force Base, Texas 78235-5000, October 1991, page145. (REF B)
3. Letter from Lane Evans, Ranking Democratic Member to Honorable Anthony J. Principi, Secretary, Department of Veterans Affairs, Washington, DC 20420, 15 July 2004. (REF C)
4. DEPARTMENT OF VETERANS AFFAIRS, (CLASSIFIED) Report To Secretary Of The Department Of Veterans Affairs On The Association Between Adverse Health Effects And Exposure To Agent Orange (C), Admiral E.R. Zumwalt, United States Navy, May 5, 1990, page 13. (REF D)
5. DEFENSE THREAT REDUCTION AGENCY (DTRA), Corrective Measures Study/Feasibility Study (CMS/FS), February 2002, Introduction, pages 1-2. (REF E)
6. DEFENSE THREAT REDUCTION AGENCY (DTRA), Corrective Measures Study/Feasibility Study (CMS/FS), February 2002, Annex G GROUNDWATER SURVEY, Section G-4 Environmental Setting—Groundwater at Johnston Island, page G3. (REF E)
7. DEPARTMENT OF VETERANS AFFAIRS, (CLASSIFIED) Report To Secretary Of The Department Of Veterans Affairs On The Association Between Adverse Health Effects And Exposure To Agent Orange (C), Admiral E.R. Zumwalt, United States Navy, May 5, 1990, page 16. (REF D)
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9. OCCUPATIONAL AND ENVIRONMENTAL HEALTH DIRECTORATE, Preliminary Public Health, Environmental Risk, and Data Requirements Assessment For The Herbicide Orange Storage Site At Johnston Island, Brooks Air Force Base, Texas 78235-5000, October 1991, page145. (REF B)
10. <http://www.fws.gov/Refuges/profiles/index.cfm?id=12515> (REF G)

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11. OCCUPATIONAL AND ENVIRONMENTAL HEALTH DIRECTORATE, Preliminary Public Health, Environmental Risk, And Data Requirements Assessment for the Herbicide Orange Storage Site at Johnston Island, Brooks Air Force Base, Texas 78235-5000, October 1991, page 58. (REF B)
12. EPA COLLUSION WITH INDUSTRY, "Testimony to the US Environmental Protection Agency (EPA) Presented At Its Hearing of December 14, 1994, Concerning the Reassessment of Dioxin." A Very Brief Overview, Liane C. Casten, Synthesis/Regeneration 7-8, Summer 1995. (REF H)
13. <http://www.parsons.com/construction/environmental-remediation-andrestoration/projects/johnston-atoll.asp> (REF I)
14. National Academies Institute of Medicine, July 27, 2007. (REF J)
15. <http://www.sciencedaily.com/releases/2006/11/061116081851.htm> (REF K)
16. <http://www.sciencedaily.com/releases/2007/04/070419103733.htm> (REF L)
17. Letter from Lane Evans, Ranking Democratic Member to Honorable Anthony J. Principi, Secretary, Department of Veterans Affairs, Washington, DC 20420, 15 July 2004. (REF C)
18. Gary D. Moore, Chairman, Michigan Agent Orange Commission, 5161 Howard Road, Smiths Creek, Michigan 48074-2023. (REF M)
19. DEPARTMENT OF VETERANS AFFAIRS, (CLASSIFIED) Report To Secretary Of The Department Of Veterans Affairs On The Association Between Adverse Health Effects And Exposure To Agent Orange (C), Admiral E.R. Zumwalt, United States Navy, May 5, 1990, page 17. (REF D)
20. UNIVERSITY OF UTAH, Letter from William H. McClennen to Major Alvin Young, Brooks Air Force Base, Texas, 7 November 1979, page 2. (REF N)