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ENVIROCARE OF UTAH, INC.

THE SAFE ALTERNATIVE

October 11, 1999

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VIA FACSIMILE

Mr. John Hickey
Chief, Low-Level Waste and
Decommissioning Projects Branch
U.S. Nuclear Regulatory Commission
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards
Washington, D.C. 20555-0001

Re: Disposal of Radioactive Waste from Colonie, New York at RCRA Disposal Facility

Dear Mr. Hickey:

I understand that the United States Army Corps of Engineers ("USACE") has advised the Nuclear Regulatory Commission ("NRC") of its intention to ship radioactive waste from the Colonie, New York, Formerly Utilized Sites Remedial Action Program ("FUSRAP") site to a RCRA disposal facility. In this regard, I have attached a copy of a letter from Gregory E. Johnson of the USACE to you.

Apparently, Mr. Johnson believes that radioactive waste from the Colonie site is entitled to be "exempted" from the NRC's disposal requirements because it contains "unimportant quantities of source material" as defined by 10 CFR 40.13(a). For the reasons set forth in my September 24, 1999 letter to Chairman Dicus, a copy of which I have attached for your convenience, Envirocare of Utah, Inc. ("Envirocare") strongly objects to the USACE's proposal to ship radioactive waste from the Colonie site to a RCRA disposal site that is not licensed or regulated for the disposal of radioactive waste.

Further, it appears from the materials that Mr. Johnson has provided to you on behalf of the USACE that the subject waste has been enriched and constitutes special nuclear material. Apparently, the USACE does not intend to comply with the NRC's standard for special nuclear material of any enrichment. Instead, the USACE intends to use a less restrictive standard and has determined that only material enriched greater than 1% in

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uranium-235 will be considered special nuclear material by the USACE. The USACE's selection of a 1% enrichment cutoff appears to be an important factor in its claim that this material is unimportant source material.

The information submitted by Mr. Johnson is not complete. However, as I have made clear previously, the NRC is neglecting its duty to protect human health and the environment if it allows "unimportant quantities of source material" to be disposed in facilities that are not regulated for radioactive waste disposal. Moreover, I cannot envision how the NRC would allow the USACE to redefine special nuclear material and dispose of the Colonie radioactive waste at a RCRA facility.

Finally, apparently the USACE is attempting to justify shipping waste from the Colonie site to a RCRA disposal facility based on "cost-savings." I do not know how Mr. Johnson has calculated his "estimate" to dispose of the Colonie waste at Envirocare, but you should know that the cost for the USACE to dispose of 1,770 cubic yards of regulated mixed hazardous and radioactive waste at our licensed mixed waste disposal cell would be $1.1 million and not $4.5 million as asserted by Mr. Johnson.

By copy of this letter to Chairman Dicus and the other Commissioners, I am advising them of my concerns relating to the USACE's plans to ship radioactive waste from the Colonie site to a RCRA disposal facility.

Thank you. I look forward to your response.

Very truly yours,

Charles A. Judd

cc: Chairman Greta Joy Dicus
Commissioner Nils J. Diaz

Commissioner Edward McGaffigan, Jr.
Commissioner Jeffrey S. Merrifield
Richard Meserve, Esq., Covington & Burling
William D. Travers, Executive Director for Operations, NRC
Paul Lohaus, Director, NRC Office of State Programs
John T. Greeves, Director, NRC Division of Waste Management
Karen Cyr, NRC, Office of General Counsel
Steven Page, Office Director, EPA Office of Radiation and Indoor Air
Dianne R. Nielson, Executive Director, UDEQ
William J. Sinclair, Director, UDEQ Division of Radiation Control
Paul Merges, Director, New York Department of Environmental Conservation
Clive Strong, Idaho Attorney General's Office
Gregory E. Johnson, PE, USACE, Baltimore District

All cc's with enclosures

Mr. John Hickey
Chief, Low-Level Waste and
Decommissioning Projects Branch
U.S. Nuclear Regulatory Commission
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards
Washington, D.C. 20555-0001

Dear Mr. Hickey;

The purpose of this correspondence is to notify you of our intent to ship certain radiologically contaminated waste from the Colonie, NY, Formerly Utilized Sites Remedial Action Program (FUSRAP) site (Colonie Site) to a RCRA disposal facility.

We have an estimated 1,770 cubic yards of above ground stockpiled material, including soils and concrete building debris, prepared for disposal. In addition, we have about 11 acres of radiologically contaminated soil in place at the Colonie Site. Virtually all of this material contains RCRA hazardous substances in the form of elevated levels of lead and other metals. The material will be removed and tested for off-site disposal through the course of the remedial action. Enclosure A provides background information regarding the Colonie site history, license considerations, and material characterization. Some portions of the stockpiled material and some portions of the in-situ soils contain "unimportant quantities of source material", as that term is defined in Title 10, Code of Federal Regulations, part 40.13(a). It is these portions that we intend to ship to a RCRA disposal facility.

The United States Army Corps of Engineers estimates the cost to ship the entire 1,770 cubic yards of the Colonie Site stockpiled material to Envirocare, a disposal facility licensed for receipt of source material, to be $4.5 million. Of the 1770 cubic yards of above ground stockpiled material, approximately 960 cubic yards is source material containing a uranium average less than 0.05% by weight. (See Attachment 3 of Enclosure A for sampling data on stockpiled material.) If 960 cubic yards are shipped to a RCRA facility permitted to accept "unimportant quantities of source material", the cost savings would be close to $2 million. Further, USACE estimates an additional cost savings of up to $20 million if we ship the anticipated volume of in-situ soil expected to contain "unimportant quantities of source material" to a RCRA facility, instead of the sending entire volume to a NRC licensed facility.

We understand the Commission decided that similar waste streams, to be shipped from the METCOA site in Pulaski, Pennsylvania, and from the Lake City Army Ammunition Plant in Independence, Missouri, were not subject to the NRC's disposal requirements under 10 CFR Part 20. (See Enclosure B, copies of NRC letters dated December 23, 1998 and April 5, 1999.) Furthermore, we understand that the Commission did not require manifesting the shipped material pursuant to 10 CFR Part 20.2006. We believe that the Colonie Site waste stream containing "unimportant quantities of source material", identified above, warrants a similar treatment.

Therefore, unless there are objections on the part of the Commission, we intend to ship the segregated 960 cubic yards of stockpiled source material to a RCRA facility permitted to accept thorium and uranium less than 0.05% by weight no latter than November 1, 1999. It is our intent that all additional material excavated from the site that is identified as source material containing thorium or uranium less than 0.05% by weight will also be shipped to a permitted RCRA facility. It is also our intent to get approval from the necessary State agencies prior to disposal.

We look forward to your concurrence with our proposed approach. Please advise us in writing if this approach is acceptable. If you have any questions, please call me at 410-962-2207 or our technical point of contact, Mr. Hans Honerlah, at 410-962-9184. Thank you for your consideration in this matter.

Sincerely,
Gregory E. Johnson, PE
Chief, Hazardous, Toxic, and
Radiological Waste Branch
USACE, Baltimore District

ATTACHMENT 1
Colonie Historical Site Information

Industrial operations at the site began in 1923, when the Embossing Company purchased a portion of the present-day site to construct a facility for manufacturing wood products and toys. In 1927, Magnus Metal Company, Inc. purchased the property and converted the facility to a brass foundry for manufacturing railroad components. Magnus cast the brass components in sand molds and also manufactured brass bearing housings with surfaces of babbitt metal (an alloy of lead, copper, and antimony). Preparation of the bearing surfaces for bonding with the brass housing involved degreasing the bearings with immersion in an acid bath.

In 1937, NL Industries purchased the facility continued the brass foundry operations initiated by Magnus, and bought an adjacent lot that contained a portion of Patroon Lake. At some point before 1941, NL Industries began filling Patroon Lake with used casting sand. After World War II, the plant began casting aluminum mainframes for jet airplanes. In 1958, the nuclear division of NL Industries began producing items manufactured from uranium and thorium under a license issued by the Atomic Energy Commission. NL Industries discontinued its brass foundry operations in 1960.

Between 1958 and 1984, NL Industries carried out a number of processes using radioactive materials consisting primarily of depleted uranium but also of thorium and enriched uranium. The plant handled enriched uranium from 1960 to 1972. From 1966 to 1972, NL Industries held several contracts to manufacture fuel from enriched uranium for experimental nuclear reactors. Operations were also conducted at the plant to reduce depleted uranium tetrafluoride to depleted uranium metal, which was then fabricated into shielding components, ballast weights, and projectiles. As a result of NL Industries' operations, residual radioactive materials are present at the site buildings, grounds, and Vicinity Properties (VPs).

Other processes conducted at the plant included an electroplating operation for plating uranium with nickel and cadmium. Chemicals used in the plating operation included nickel sulfamate, sodium cyanide, ferric chloride, nitric acid, silicate phosphate, iridite (chromium brightener), cadmium metal, nickel metal, boric acid, and perchloroethylene (PCE). How or where most of these materials were disposed is unknown because very few disposal records could be located. However, NL Industries' letters indicate that under an Atomic Energy Commission (AEC) license, approximately 42 m^3 (55 yd^3) of

graphite, slag, refractory, uranium oxide, insoluble oil, metal scrap, and combustible trash were buried in the Patroon Lake area in 1961. Chemical wastes and packaged chemicals used at the site have included acids, bases, degreasing agents, carbon tetrachloride, benzene, polychlorinated biphenyls (PCBs), cyanide, heavy metals, and asbestos. The chemicals present on the Resource Conservation and Recovery Act (RCRA) Part A application permit have been removed from the site as part of the closure of the site as an interim RCRA storage facility.

On February 15, 1980, the New York State Supreme Court issued a temporary restraining order barring NL Industries from operating its facility because it emitted unacceptable airborne releases of uranium compounds. The temporary restraining order was amended on May 12, 1980, to allow NL Industries to continue limited operation. The amended order required the company to initiate an independent investigation to assess all adverse environmental conditions in onsite soil and on the VPs that may have been caused by airborne discharges of radioactive particulates from the plant. In 1980, NL Industries contracted Teledyne Isotopes to perform a radiological survey of the facility and its vicinity.

New York State officials closed NL in 1984 and then Congress authorized DOE to remediate the property. In February 1984, the Secretary of Energy accepted an offer from NL Industries to donate the land, buildings, and equipment to DOE to help expedite the cleanup. The Army Corps of Engineers accepted the property on behalf of DOE on February 29, 1984, at which time the title was transferred to DOE. In 1985, DOE acquired a portion of the Niagara Mohawk property bordering the site to the north and northwest and subsequently designated it as part of the site.

From 1984 to 1995, the Colonie FUSRAP site was used for interim storage of radioactive materials removed from 53 VPs. These materials previously stored at the site have been removed and shipped offsite for disposal. Since 1984, there have been no reported fires, explosions, or accidental releases to the environment.

Material Characterization

Due to the fluctuation of uranium isotopes occurring in nature and the technical limitations associated with analysis, it may be difficult to determine if waste material is associated with depleted uranium (source material) or enriched uranium (special nuclear material). To distinguish between source material and special nuclear material at the site, we are deeming uranium 235 with a percent mass of less than one to be source material. All uranium 235 with a percent mass at or above one will be deemed to be special nuclear material.

Of the 1,770 cubic yards of above ground material, approximately 960 cubic yards is source material containing a uranium average of less than 0.05% by weight. The 960 cubic yards estimate includes all of stockpiles 3, 8, and 9 and small portions of stockpiles 5 and 7 (See Attachment 3 for sampling data on the stockpiled material).

A majority of the in-situ radiological contamination is from airborne emissions, which is low activity, located at near-surface depths. Our sampling data indicate that much of this will be source material containing a uranium average of less than 0.05% by weight, making it eligible for disposal at a RCRA facility. A smaller portion of the in-ground radiological contamination is buried at depths of up to 30 feet. Our sampling data indicates that the deeper material may be source material of higher activity or possibly special nuclear material, requiring disposal at a facility licensee to receive source material (uranium above 0.05% by weight) or special nuclear material. (See Attachment 4 for sampling data on the in-situ soil.)

It is our intention to establish a correlation between field scanning instruments, field gamma spectroscopy, and an offsite laboratory performing alpha and gamma spectroscopy. Conservative screening levels will be established to ensure proper segregation of waste materials.

Enclosure A
Background Information Colonie FUSRAP Site

Site History

The Colonie Site was owned and operated from 1937 to 1984 by National Lead, Inc. (NL). During these years, NL carried out a number of processes using radioactive materials consisting primarily of depleted uranium (source material), but also of thorium (source material) and enriched uranium (special nuclear material). (See Attachment 1 for a more detailed operational history of the Colonie Site.) The United States Department of Energy (DOE) acquired ownership of the Colonie Site in 1984, for the purpose of remediating it under FUSRAP. From 1984 until present the Colonie FUSRAP Site has acted as an interim storage site for cleanup of vicinity properties and the site itself has been subject to remedial activities.

Licensing Considerations

We are aware that the following licenses were issued to NL for its use of radioactive material:

- Nuclear Regulatory Commission (NRC) License No. SUB-748, for possession of 38,000 pounds of uranium during fabrication of a module replacement tank upper shield
- New York State (NYS) License No. 235-0482, issued for fabrication of detailed DU parts
- NRC License No. SNM-686 (Docket No. 70-750), issued for the fabrication of Advanced Test Reactor fuel plates

When DOE acquired the Colonie Site, all prior NRC and NYS Licenses were administratively terminated or allowed to expire, because of DOE's authorities under the Atomic Energy Act.

The U.S. Army Corps of Engineers (USACE) assumed administration of FUSRAP in 1997, and is currently performing response activities at the Colonie Site in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The USACE on-site activities are being performed without licenses. The Commission has acknowledged that no NRC licensing or other regulatory requirements apply to the USACE for the USACE handling of radioactive material at the site. (See Attachment 2, "Issuance of Directors Decision Under 10 CFR 2.206," in the Federal Register dated April 5, 1999, 64 FR 16504.)